YACHTING

Volume LIII JANUARY + 1933 Number I

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Approaching the "Pamir" after our 15-mile row. She is hove to, waiting for us

A Sea Meeting

An Incident of a Cape Horn Passage

By A. J. VILLIERS

FOR 85 days we had been looking out for other sailing ships, and except for one which we had overhauled and left behind in the Tasman Sea, had never seen one. On the Line we saw twelve steamers. Off the Horn we had seen a steamer, but square sail the horizon had not shown us at all. Then we awoke with the daylight on the eighty-sixth day, and there was a sail ahead!

At first we thought it only a cloud, as we had imagined many clouds to be sailing ships prior to that late day in the voyage. But it was no cloud; as the sun rose and the light cleared, we could see that it was a big sailing ship like ours, one of the big grain racers coming up from Australia with a full cargo of wheat for the English Channel for orders. There were twenty ships altogether in the trade, and we had sailed together with three of them, while eight or nine we knew to be somewhere not far from us. Our ship was the four-masted bark *Parma;* we had sailed together with the *Pamir*, *Melbourne*, and *C. B. Pedersen*, and a fifth four-poster, the Clyde-built *Archibald Russell*, had left five days ahead. Somewhere about might also be the bark *Penang*, the barkentine *Mozart*, and the four-masted bark *Pommern*. The *Pamir*, a smaller ship with a greater sail spread, was our keenest rival. If we could beat her to the Channel we knew that we should be doing very well.

And now what ship was this that we had started up out of the horizon ahead in a South-of-the-Azores calm? The excitement was tense, and the feeling of the race gripped the lot of us. There was next to no wind and we were just drifting along with barely steerageway; none the less the Mate bustled about the decks, seeing to the set of this sail and the tautness of the hoist of that, tightening a brace here, a halliard there, and all the tacks and sheets in the ship. *Parma* must do her best, wind or no wind. The Old Man was out before five o'clock in the morning with a great brass telescope in the jigger top, and all hands were on the fo'c's'le head and the bowsprit-end, debating fiercely on the identity of the stranger although all we knew about her at that early stage was that she had sails.

She might have been an auxiliary steamer, a yacht with students from Yale making a summer cruise to the Azores, a nitrate trader coming up from Chile with a saltpetre cargo for a Dutch factory in Delfzyl.

"It is *Lawhill,*" said a youth who had never seen that ship and could barely see this one.

"*Lawhill*, heck!" yelled a compatriot. "It is *Pommern.*"

"*Ponape,*" said a third.

"*Archibald Russell,*" said the cook, swearing he could recognize the Old Man walking on the poop.

The steward said he could see the cook throwing flapjacks in the galley. . . .

As a matter of fact, we could see nothing at all; but, fortunately, although the near-calm continued, we were carrying steerageway while the other ship was not, and gradually we drifted a little closer. At first we did not know even which way she was bound, and there was a long argument about that. We saw the other ship swing abeam, and through the binoculars then could make out unmistakably that she was a four-masted bark.

That was not much help. There were 14 four-masted barks in the race, and the only one we knew for certain she could not be was the one we sailed in.

So long as we steered and the other ship did not, we drifted a little closer, but then she picked up a faint air and went off on her course again and we could see that she was homeward-bound. She *was* a grain racer then; from the royal yard we could distinguish a few points about her rig—not much, but enough to let us guess a little more accurately at her probable identity. We saw that she was a later-day windjammer, one of those big ones which were built like steamers with midships sections and the familiar three-island well-deck style of the tramp steamer; our own belonged to the older breed of Drake and Nelson and those more leisured days, and we had a long open main deck about a hundred yards long. The midships section breaks the force of the Cape Horn seas, and a ship so built can be driven better in the westerly gales. . . . Knowing this, we knew the other was either a four-poster from the House of Laeisz, in Hamburg, hurrying up to Europe with nitrates in her hold; the four-masted bark *Moshulu*, with lumber from Puget Sound; or the *Pamir*, our greatest rival.

Modern Cape Horners. Two able seamen of the "Parma's" crew who helped to pull the lifeboat on our visit to the "Pamir"

The chances that she was *Pamir* were pretty strong. *Moshulu* had been laid up in Puget Sound when we left Australia and was not likely to be in the North Atlantic then with full cargo; most of the Laeisz ships had been laid up, too. *Parma* herself used to belong to that famous line of the Flying "P" and had then had no name for ability to sail up on any of her sisters. Therefore we could drop the idea that this stranger was *Padua* or *Priwall* or any other of the big four-masted Germans; *Priwall* was laid up in Hamburg, anyway.

It seemed lamentably certain that the stranger was *Pamir*. However, we could have no real certainty about it; she was twenty miles away when we saw her first, and the nearest she came was 15 miles. To see her hull we had to use glasses from the t'gall'nt yards. . . . All the morning the argument continued, the Old Man maintaining she was *Pamir*, like it or not, and the mates sticking out for *Ponape* or *Lawhill*. We would much sooner have seen these others, since they sailed so long before us, and *Pamir* we would rather have far behind.

If we had a motorboat, said the Old Man, we would go and see. It looked as if the calm would continue. South of the Azores there is the calmest place on earth (except for the Pacific side of Panama): we knew that fact only too well. We had been lying there nine days, watching our chances of a good passage slowly going to the devil. Until then we had gone very well. The Old Man said he had been becalmed there once for five weeks.

Now that we had company it was not so bad. . . .

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The day was Saturday. Coming through the trade winds and in that calm we had had a crowd of daymen and had only five in a watch — not many for a 3,000-ton four-masted bark, but in that weather there was nothing to do save keep lookouts and wheels, and she more or less steered herself. We did not have a big crew, and the only way to get the work done in such a vessel is by making a lot of daymen in the trade winds. They were accustomed to work hard all the week, six to six, and then from one o'clock on Saturday afternoon until six o'clock on Monday morning they were free.

A little after one o'clock this day the crowd of them came aft to see the Old Man. They wanted to borrow a boat, they said.

"Whatever for?" asked the Old Man, somewhat astonished.

To pull over to the stranger, they said. They wanted to find out for sure who she was and whether she had seen any of the other sailers.

Pull halfway to New York across the North Atlantic? Were they mad? That ship was 15 or 16 miles away.

They grinned. They knew the Old Man was the keenest of all to have the other ship's news and to make a visit.

Yes, certainly they could have a boat, said the Old Man, grinning himself. The adventure of the thing appealed to him. To row 15 miles in midocean for a yarn aboard another windjammer! It was a strange sea proceeding for the prosaic year of dullness and depression, 1932. . . . They had better have the starboard lifeboat, he said, and take extra water and food. The sail they could leave behind. It wasn't any use. No apprentice could go; he was responsible to their parents and was going to deliver them back to their homes. The gang could do what they liked, but he must have his boat back. . . .

The Old Man did not go himself. Of course, he could not leave his ship for so long. The Mate cheered all hands by forecasting a watery grave while the preparations for the boat voyage were going on, and said he would not make the trip for 5,000 dollars — no, and flowers in his coffin. . . .

It was sizzling hot, one of those days when the pitch is soft in the seams and the wooden decks burn the bare feet. We put two extra breakers of water in the boat and a lot of biscuits, as well as some dried apricots and a bottle of rum. The Old Man donated a bottle of excellent liqueur that somebody had given him in Hamburg eight months before. He didn't drink. The steward and everybody piled in all the books they had, as presents for the other crew. We had Swedish newspapers a year old, German novels with the covers torn off, English and American magazines taken surreptitiously from an Australian library, and a bundle of the *Illustrated London News* dating back to the Boer War.

The apprentices looked enviously at us over the rail as we put the boat in the water and left with cheers. There were eleven of us in the boat, all told — the Third

Mate, the sailmaker and the carpenter, our only two able seamen, an American yachtsman who had come down from New York to Australia to join the ship, some German and Finnish ordinary seamen, and my wife and I. (My wife was on the articles as stewardess or deputy sailmaker or fifth cook or something, but didn't have to do any work.) If the gang of us did not get back to our own ship she would be badly handicapped for the rest of the voyage. . . .

We had to go back, just after the start, for a compass. We could not see the other vessel at all from the lifeboat, being so close to the surface; we took a course on her from the big ship, and set off. The sun beat down and the water was blue and limpid and absolutely calm; hour after hour we rowed, with four on the oars taking hour-about, keeping up ship's style with bells and watches and so on; but after three hours we began to think it was a mighty long way. We set off in high spirits and bright converse startled the flying fish as we swept along, but after a while the converse ceased and the boys, stripped to the waist, pulled on steadily at the oars. After three hours all that we could see of either ship was a blur on each horizon. . . .

It looked as if we would be lucky to reach the stranger before night. If a breeze came and he did not see us, where were we? But the glass was high, the sea stagnant; it seemed only too regrettably certain that the calm would last for weeks. It was June. There are always these accursed calms in the sea there south of the Azores, but June is the very worst month of them all.

We pulled on. A startled frigate bird circled round us with astonishment clear in its eyes; it came very near and was obviously wondering intently whatever on earth these crazy human beings were up to. Flying-fish, frightened by the splash of the oars, skimmed away; now and again we pulled through big patches of Sargasso weed with the small crabs and the little fishes scurrying away from these blots of stagnation on the face of the ocean. Sometimes we went through a catspaw of wind, but it never lasted for more than a few minutes. The sun sank lower and lower; our own ship was now almost lost to sight, and we could make out the jibboom of the stranger above the horizon. She was a tall ship with a big sail area; we did not look much, pulling on the oars. How hot it was!

Top. Rowing on the North Atlantic. Bottom. Our ship, the four-masted bark "Parma," as she appeared when we pulled away from her

After five hours we were near by; we had been pulling between three and four miles an hour. We could pick out the other ship's every detail now — the lofty masts, the two gaffs on the jigger, the big teak charthouse on the midships section, the small poop, the port of registry on the stern. It was too long for Hamburg; it must be Mariehamn, then, and the ship *was Pamir!*

In the last light of the evening we came aboard. . . .

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They *were* astonished that we had rowed so far. There were few old sailors in the crew; they had not heard of ship-visiting. But their welcome was profuse, and whether they had heard of ship-visiting or not they certainly enjoyed this one. Homan, one of our able seamen, found a former shipmate from the four-masted bark *Priwall:* with this exception no one in either ship had ever seen anyone in the other, but one minute after we had stormed over the rail like a gang of pirates falling on their prey, the *Pamir's* main deck looked like a mothers' meeting and chins were wagging and tongues going ten times more busily than ever they did even in scandal hour at a women's club social evening. Talk! Our boys had never been so loquacious the whole voyage. In German, in Swedish, in Finnish, and in English the animated groups busily exchanged their news. They had been as anxious to find out about us as we had been for news of them, but they never would have thought of rowing over to us.

In spite of the excitement we remembered to take a bearing on our ship by the *Pamir's* compass before the light quite failed. She was about 18 or 19 miles away then, and only the upper sails could be seen from the midship section. . . . We could not remain long aboard and would soon have to set out on the return journey.

We were well received. I had a book that had been written about *Pamir* to give to the master — it was a lamentable translation of a work in German that was not very remarkable for its sea accuracy; but it was about their ship and would interest them. We swapped books and we swapped magazines and we swapped news. News, news, news! That was what we wanted — not news of the world (for that we would have in good time), but *his* news, what

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"Let's Go Fishing"

Accessible Florida Keys Offer Fine Sport

By

BRADFORD BURNHAM

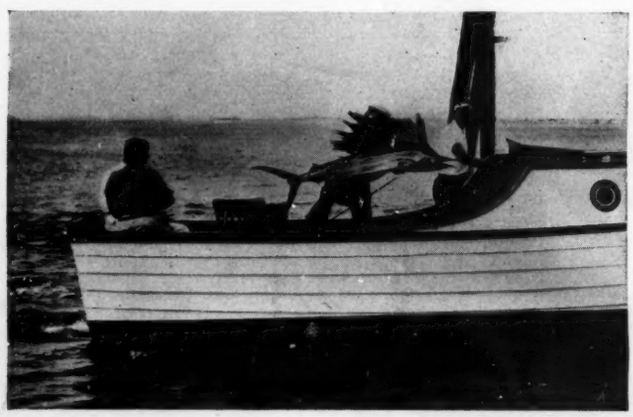
Rosenfeld Photos

Going out for a day's fishing off the Florida Keys

PRIOR to the recent opening of the Oversea Highway a visit to that fascinating string of emerald beads known as the Florida Keys seemed to many as arduous an undertaking as an expedition to the South Sea Islands. True, the inside water route, continuing southwestward from Miami, has for a long time offered yachtsmen a 4-foot deep channel in semi-protected waters all the way to Key West; but comparatively few who cruise southward in their own boats get farther than Miami. And many yachtsmen and fishermen with limited time arrive by other means.

Picking up the Dixie Highway at its southern terminus, Homestead, thirty miles south of Miami, the Oversea Highway provides a swift, smooth and interesting automobile route to the numerous fishing camps of the Keys — the only fully tropical land within the United States proper. Eleven and a half miles without a curve, grade, or cross road, and the road crosses by a long viaduct and several small islands to Key Largo, the largest of the Keys. At the northeastern end is the well-known Anglers' Club, now one of the Henry L. Doherty properties. On Key Largo, also, is "Doc" Knowlson's Fishing Lodge, just sixty miles from Miami — an easy hour and a half run under such perfect road conditions. Here we find a comfortable lodge on the ocean front, with boats, and guides to escort you to the outer reef at the edge of the Gulf Stream, between Carysfort Lighthouse and the Elbow, where sailfish, amberjack, wahoo, dolphin and barracuda lurk, eager to test your skill with rod and reel, and where, at the end of day, a full-course stone crab, green turtle steak, or fish dinner, worth coming twice as far to eat, bids you enjoy yourself.

Catching the gamey sailfish is as exciting sport as one can wish



Key Largo, only sixty miles south of Miami by an excellent highway, is the home of the well-known Anglers' Club

Straight on through jungle and an occasional plantation of lime trees, the highway runs, past Rock Harbor, where there is an observation tower worth climbing for the view of some 35 keys it affords, and Tavernier, where Captain Albury, Captain Lowe and others are at your service with fishing boats and invaluable local information.

Shortly after leaving Tavernier, the road crosses by bridge to Plantation Key and thence by another bridge to Windley Island, where there is a large coral rock quarry; then, by a third bridge, to Upper Matecumbe Key. At nearly all of the bridges are camps or houseboats where fishing tackle can be rented for fishing directly from the

Landing a good one on the edge of the Gulf Stream. Practically all of the fishing is done from power boats

bridges or from small boats in adjacent waters. There are filling stations and small grocery stores at most of the little settlements where supplies may be purchased if you plan to camp out, as many do, bringing auto-tents or little pup-tents to put up on the beach.

Numerous fishing camps are located on Upper Matecumbe, which is several miles long. At the settlement of Islamorada is the comfortable Matecumbe Hotel, and also Captain Russell's place, with inviting cottages for rent. At Whale Harbor, also on this key, will be found the Oversea Camps, and Captain Tom's fishing camp.

Crossing by a causeway a little over a mile long, we come to Lower Matecumbe Key — and the jumping-off place at Jack Brant's, 92 miles from Miami. For here, at present, we must take the ferry if we are continuing on down the keys by automobile. At the present time relief for unemployment in South Florida is momentarily expected by the construction of bridges to close the two gaps now existing on the Oversea Highway, assistance from the Reconstruction Finance Corporation and legislative support both seeming certain. The construction of these bridges will be a great convenience to fishermen visiting the lower keys, as well as to local residents of the whole section and of those bound to and from Cuba through Key West.

To reach what are known as the Lower Keys, it is advisable to arrive at the ferry slip on Lower Matecumbe shortly before 1.00 P.M. or (in the winter) 8.00 A.M. unless time is no object, for the complete ferry schedule is as above. You might do worse, however, than spend a few hours at Jack Brant's hospitable lodge and enjoy one of his inimitable conch stews. If you wish to spend the night, rooms are available aboard his houseboat moored near the ferry slip. At the Carribee Colony, near at hand, overnight cottages are also available and at both places boats may be hired.

The water about these keys is extremely clear and of a deep green color at most times, which gives way to a beautiful turquoise blue, while farther out, in deeper water, it appears to be a rich purple on the horizon line. Against these colors, always brilliant, the bright green of the palm and the darker green of the mangrove, with its red bark roots, stand out in sharp contrast. At times the Keys seem like emeralds set in silver. To the north of Matecumbe the small, round Lignum Vitae Key, owned by Commodore Hugh Matheson, of the Biscayne Bay Yacht Club, is densely covered with tropical vegetation, including many tropical hardwood trees such as lignum vitae, mahogany, madeira and gumbo limbo.

A 16-mile ferry crossing, then 14 miles of highway and a second ferry ride of ten miles brings us to the Lower Keys, with forty miles of interesting highway to Key West. The Lower Keys are for the most part smaller, more barren and less settled than the Upper Keys (except, of course, Key West and Marathon, on Key Vaca, where the railroad shops are located). In some respects this part of the drive is the more interesting, for the road

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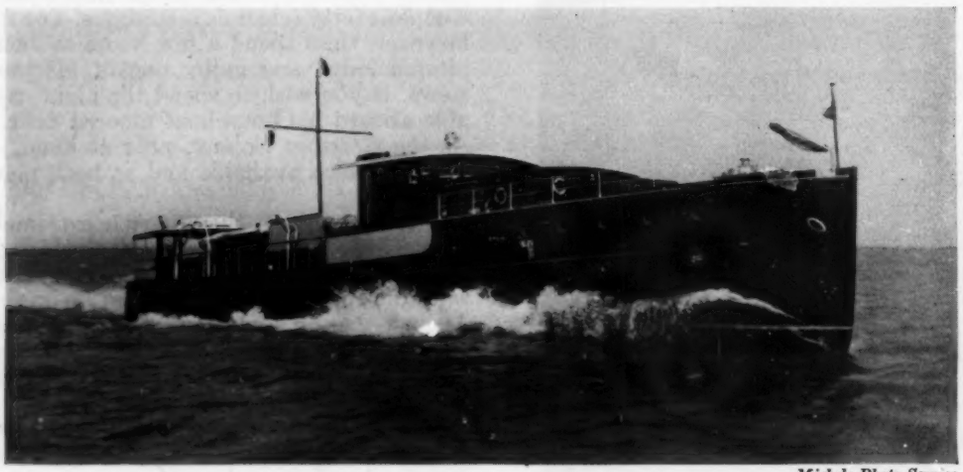
On the way to the fishing grounds

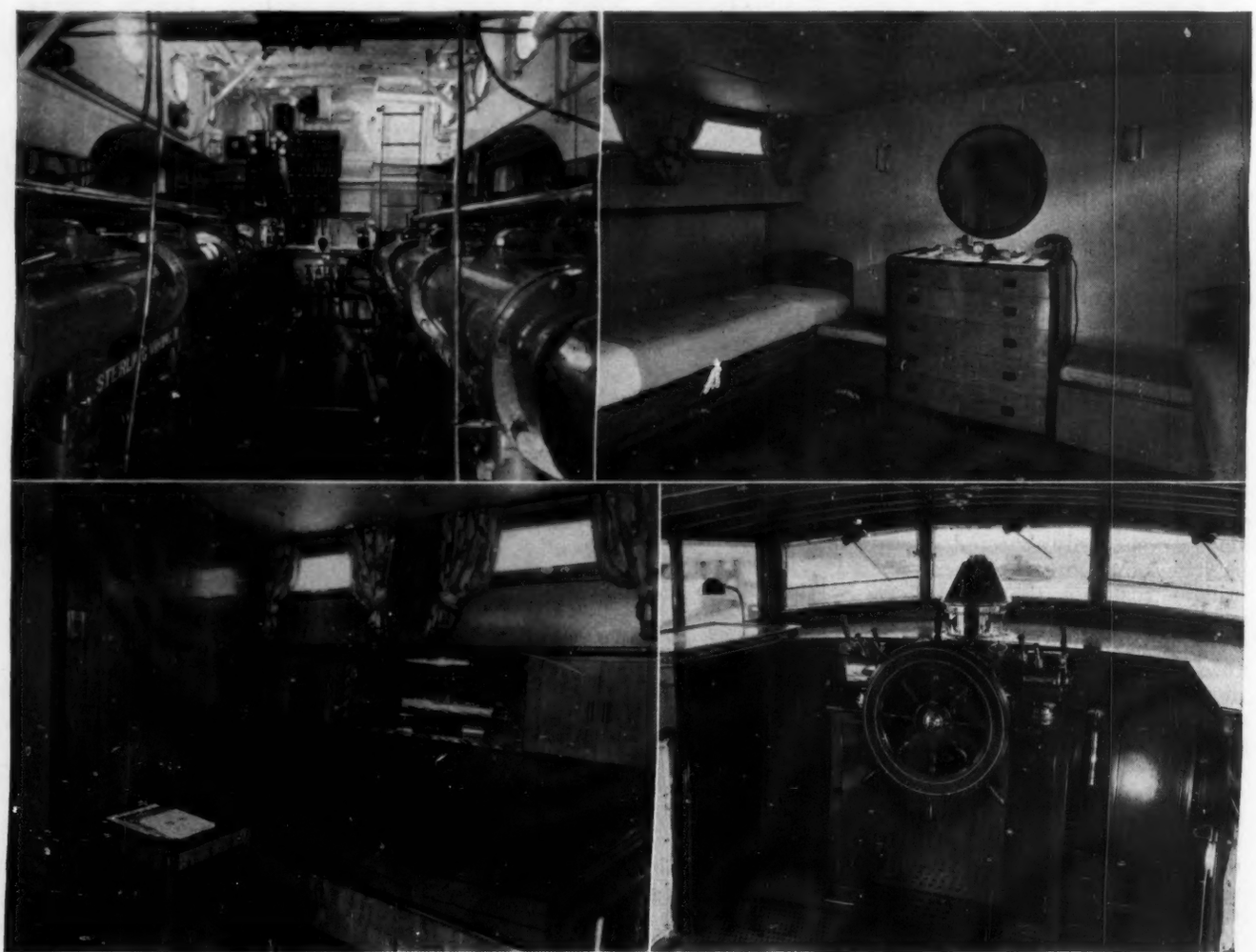
A fishing camp on Long Key, with its sleeping cabins located in a grove of palms

"Wasp"—An 88-Foot Express Cruiser

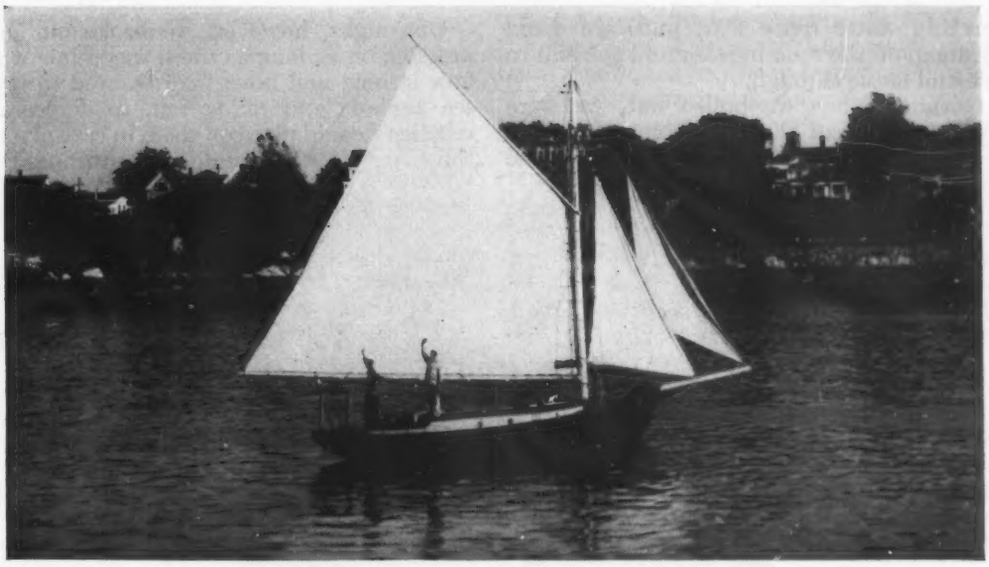


Michels Photo Service

"Wasp" is owned by Philip K. Wrigley, of Chicago, and was built by the Great Lakes Boat Bldg. Corp., from designs by Henry C. Grebe & Co. Her clean-cut lines and modern interior represent the latest trend in express cruiser design. The interior, done in natural finished oak, imparts a feeling of spaciousness and simplicity to the cabins, which is to be desired. Engine controls are brought to the raised pilothouse which gives the helmsman a commanding view. "Wasp" is powered with two 565 h.p. Sterling engines which drive her up to 23 m.p.h.



The Continental Commercial Photographers



"Ochito" is a rebuilt Friendship sloop 36 feet long over all

From Bermuda to Spain

An Atlantic Passage in a 36-Foot Friendship Sloop

By J. EDWARD CROWLEY, JR.

IT HARDLY seems logical that anyone should voluntarily go to sea in a small boat, to be tossed about, subject to the vagaries of wind and weather; to work hard, and eat doubtful meals indefinitely — all in the name of pleasure. Or, perhaps, it does seem logical to some of the readers of YACHTING. At least, my wife and I are not alone in our choice of a mode of travel. The number of long passages and offshore cruises is increasing all the time. And, although many can speak with more authority and more helpfully of small boat sailing at sea, the account of our passage from Bermuda to Spain may interest some of that contingent who are happiest when off soundings.

We were lucky on the passage from Bermuda to the Azores, a circumstance which we were in a frame of mind to appreciate. When, in the fall of 1931, we made the passage from Gloucester to Bermuda, we had lots of luck, but it was all bad. The fact that it took 22 days to cover the 1800-odd miles to the Azores, and 21 days for the 600-mile run to Bermuda, reflects almost exactly the difference in the severity of the weather. For the run to Bermuda we picked the wrong season, and we do not intend to let this happen again. The passage from Bermuda to Spain was started in June, and we prospered accordingly.

Before we start the account of our Atlantic passage, our vessel deserves a little notice. *Ochito* is a rebuilt Friendship sloop with rather more sweeping sheer and a cleaner running stern than most. Otherwise she is typical; 36 feet over all, 6 feet draft, 11 feet beam, and 25 inches freeboard at the lowest point. These dimensions give us plenty of room for all conveniences (we do without the expensive ones, however), and the space necessary for two to live in over long periods.

The eleven feet of beam is a point that might raise discussion. It plays the deuce with our speed, and alongshore, especially in company, it seems to be about two feet too much. But *Ochito* is roomy, steady, and comfortable because of her ample beam, and for living on board for extended periods the wide boat is better. Off the wind, she plows out a pretty good day's run of one hundred to one hundred and fifty miles. On the wind, we get there eventually.

But to get underway. That, incidentally, seems to be the most difficult part of cruising. Leaving Bermuda was no exception to the general rule, even though we had been there for about six months. We had sailed around our anchor so long that it seemed as though we would never get it up. The delays that came were too numerous to name. If you are going on a long cruise, take my advice and plan to be ready at least two months ahead of time. Then you may get away on the intended day.

About the time we were getting ready to strangle the next person who asked "When are you leaving?", we finally "took our anchor and stood down the bay," bound, so we thought, for the open sea and the Azores.

After a close reach up the North Shore we passed Town Cut Channel into St. Georges about sunset, with a dead muzzler blowing right down the course. So we decided to put in for the night and wait for a shift to the supposedly prevailing westerly winds. When the shift came, two days later, *Ochito* was on the slip at East End St. David's, having her bottom gone over, and thereby hangs a tale.

Turning west into the channel gave us a good breeze dead aft and an apparently clear way ahead — no buoy, flag nor light, except as shown on the chart. Not so apparent was a mooring cable stretched clear across the Cut, about two feet below the surface of the water, to a rock breaker drawn against one bank. When we struck the cable, it lifted us two feet out of water aft, slewed us over on our side, and dumped us unceremoniously and promptly on the harbor side where we came up against a second submerged cable. There we stayed,

apparently making water quite fast, until we could rouse the watchman on the rock breaker and get him to lower the cable and let us through.

The next morning, when we pulled out, we were considerably relieved to find that the damage was not serious. The caulking had been started along the garboard on the starboard side, but the wood was only marred and the fastenings appeared unhurt.

The delay in St. Georges brought further trouble, for there we shipped a hand before the mast who was to prove more ornamental than useful. While we were in port he was anxious to help us in any way he could, meanwhile pleading his case. He had never had a chance to get away from Bermuda, and he wanted to see at least a little of the world; he could work hard and didn't care where he was dropped off — he'd find his way back. We succeeded in saying "No" only until we were ready to sail. The argument was clinched when our prospective sailor announced that his things were almost packed and that he could be aboard in less than half an hour. So Lionel "Cuddy" McCallam became our crew.

"Ochito" alongside the wharf at Gloucester before her start for Bermuda and Spain

Although it was not necessary to have anyone to help sail *Ochito*, we thought that things would be easier and simpler with the addition of an able-bodied 19-year-old who appeared to be something of a boatman, as they all are at St. David's. About twelve hours out we discovered that we hadn't signed on much of a sailor. But, though Cuddy is something of a problem, it is impossible to be angry with him long.

As soon as Cuddy brought his duffle aboard, we headed across to St. Georges under power, to replenish fresh stores. That was the last time the motor was willing to perform, and it took an hour of hard labor to start it at that. Afterwards it flatly refused to show any sign of life.

But we couldn't wait longer just for a motor and we certainly didn't need it during the first week out. There was plenty of wind. *Ochito* stood smoothly out to sea at 4.30 and took departure from the fairway buoy at 5.00 P.M. on June 6th, with all sails set and drawing nicely.

But, as perfection is always fleeting, our smooth gliding rise and fall developed into a bit of a race as we took in piece after piece of canvas before a rising wind, until we were surging along under double-reefed main and jumbo. *Ochito* couldn't, or, at least, didn't, wear anything more for a week. Running before a strong wind and large, though not dangerous, seas made rather strenuous work during that week, especially as it developed that Cuddy could not keep his mind on the compass and, in any case, could not keep the boat anywhere near the course. Cuddy was assigned to do the resting while Mrs. Crowley and I did the steering and the cooking, too, since Cuddy was unable to cook and was sick besides.

One night, however, we broke our general rule of pressing on as long as there was a fair wind, no matter how strong, and hove to. I wanted to try out the new sea anchors and riding sail, to determine how much reliance I could place on them in case of a real blow from the east. We rode comfortably through the night, and the gear seemed entirely adequate for much stiffer going.

The sea anchors are of ordinary design, round, thirty inches in diameter, with heavy iron hoops. The total area of the anchors — ten square feet — is enough, but none too much, and the 30-inch diameter is just right for stowing comfortably under the after bunks. Solid hoops eliminate the danger of failure.

Our first week ended in two days of rainy easterlies, too stiff to be worth bucking, especially as a shift could be expected soon. After splashing along the first day, double-reefed, with very little to show for it, out went the sea anchors. Riding that way gave us a good rest and a chance to do a few odds and ends for which we had no time during the days of steady sailing. After a day and two nights, the wind drew into the south, clear and fresh, and gave us a great boost on our way for the next few days.

Our system of watches and general procedure at sea worked rather well, I think, in the mild and favorable weather we had during the passage, although not as easily as I had expected when we took along a deckhand. I always took the wheel from dark until daylight. Eight hours makes rather a long stretch, but, sailing as lightly as possible, as we always do at night, it is not too bad. Several squalls that overtook us at night helped to break the monotony. On a couple of nights that were too dull to keep me awake, I called Cuddy to take the wheel for an hour while I curled up. During the day, from daylight until time for the noon sight, the Staff Captain would take command, with Cuddy to help, while I did some concentrated, and sometimes uninterrupted sleeping. During the afternoon, we all stood hour watches.

Unfortunately, whenever the quartering seas, which we generally had, got in the least steep, Cuddy had to be retired from duty most of the time, to insure keeping the boom on the right side of the boat, and to keep us headed in at least the general direction of the Azores. Occasionally, Mrs. Crowley would find the work at the wheel too strenuous to keep up for any period of time when the seas got high and steep. Of course, these things upset our routine now and then.

It was fortunate that the dead reckoning never had to be carried over long periods, because allowance always had to be made for the fact that Cuddy would be steering in almost every direction but down the course. To him the compass seemed to be worth only the most casual of glances. Mrs. Crowley was able to make him pay some attention to it by telling him hair-raising tales of the Doldrums and of ships lost on barren coasts.

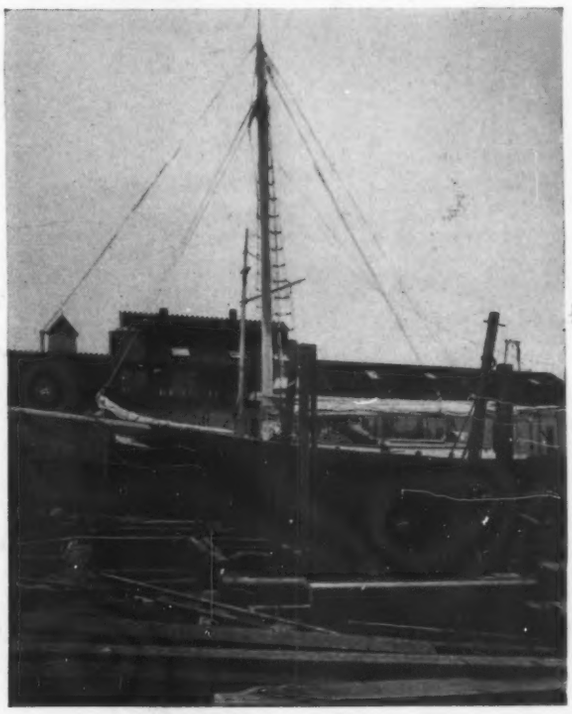
But he could help pull down a reef, and was good-natured and always willing to do anything, if we told him what, where, when, and how.

About halfway across we were provided with a bit of excitement that we would willingly have foregone. From about four in the afternoon until after dark one day we rolled in a glassy calm with a number of water spouts in various stages of development for company. The nearest any of them came to us was probably a quarter of a mile, and that particular one disappeared after several unsuccessful attempts to develop fully. But it seemed to be almost directly overhead, and quite menacing. As a matter of fact, I do not believe we were in any great danger, as there was really very little chance of our being struck. But being unable to move, and knowing the power which these spouts can develop, we had plenty of food for thought.

Our brand new motor, installed in Bermuda, was useless, the battery having been put in backwards, so that it couldn't charge, and the exhaust water being inadequately taken care of. That is all corrected now, but the motor was absolutely *hors de combat* for the entire trip.

After the water spouts left us we had the ocean to ourselves again for days at a time, with the wind varying from south through west to northwest, and so light for some four days that we barely moved. Occasional whales put in an appearance, six all told. Two of these were so close that we had to alter our course to avoid grounding on their backs. One performed beautifully for the camera. He could not have done better if he had had Hollywood ambitions, jumping clear of the water and throwing up mountains of white spray. Five ships came within sight, but four passed at night and none close aboard, which was too bad, because we might have gotten a check on our chronometer.

But of course, one of the most interesting things to be seen at sea is the landfall. We found ours no exception. It came about ten hours ahead of schedule, looming out of thick clouds about a mile away, fortunately just before and not just after dark, as the weather was too thick most of the time to pick up a light at any distance. While I was finishing my dinner on the twenty-second day out, I heard Mrs. Crowley, then at the wheel, ask, "What's that over there?" Our deckhand said that it was a cloud. After some debate, which finally reached the point where Cuddy was convinced that "land couldn't look like that," and the Staff Captain had decided that "if that is a cloud I'm scared," it seemed that binoculars and a third opinion were called for.



On the ways, showing typical underbody of Friendship sloop

It was the streaked face of Castello Branca, barely distinguishable, wreathed in smoky, dark mist about one mile away, wide on the port bow. It was our destination, but not our expected landfall. Optimistically, we had expected to see the top of Pico, sixty or seventy miles away, but it was obscured by clouds. In justice to the navigator, I must explain away the appearance of land ten hours before it was due. We carry a good chronometer, and run, generally, on one A.M. or P.M. sight and a noon sight each day, if possible, making a note of the dead reckoning only when a sight is missed. As the sights worked out within a mile or so, in any but the worst weather, the system seems quite adequate. When we were within several hundred miles of the Azores, however, it seemed safer to make our latitude, and run up to the land on it, particularly as the rate we had for the chronometer seemed to show an excessive daily loss. On the last two days we took the noon sights by a series of sights covering the noon period, instead of one at the computed local apparent noon, and read to seconds instead of to minutes, as we usually did.

Coming up on the right latitude carried us very little off the shortest course, and proved to be a lucky move. If we had been as much as a mile further south, we would have passed Fayal without seeing it. Our chronometer correction, when we checked it by the time signal in Horta, was two minutes and eleven seconds too much. That meant that we were about 33 miles ahead of where we thought we were. As this error crept in gradually, I do not believe that carefully kept dead reckoning could have detected it. Nor do I think that I could have kept a total of dead reckoning within that limit of error. Be that as it may, we sighted land without breaking our bowsprit on it. But our positive identification of the cliff took some time and a lot of consulting of charts and rattling of pages in the "Pilot." In fact, we could not be sure that we would not have to stand off for the night until, after holding our course for about an hour more, we could just make out Guia Head in the mist about half a mile away. That was a very considerable relief, as a squally southwest wind was setting almost directly onto the land, and only the certainty of a steep-to coast, with no outlying dangers, made it safe to stand in to the land at that time of day.

Coming into Horta Bay in the black darkness, with gusty winds off Guia Head and spatterings of rain, we were carrying too much canvas for entering a strange port, but we could not have shortened before we made the best of our daylight, and we wouldn't shorten after that, with our harbor furl less than an hour away.

Luckily, all was as represented inside the breakwater, with no boats in awkward positions, and the mooring buoy which we had selected was empty and waiting for us. After we tied up to it, doused sails and hung out our yellow flag for the morning, we went below and finished what delicacies were left in the stores and enjoyed the fact that it was getting to be a nasty night outside.

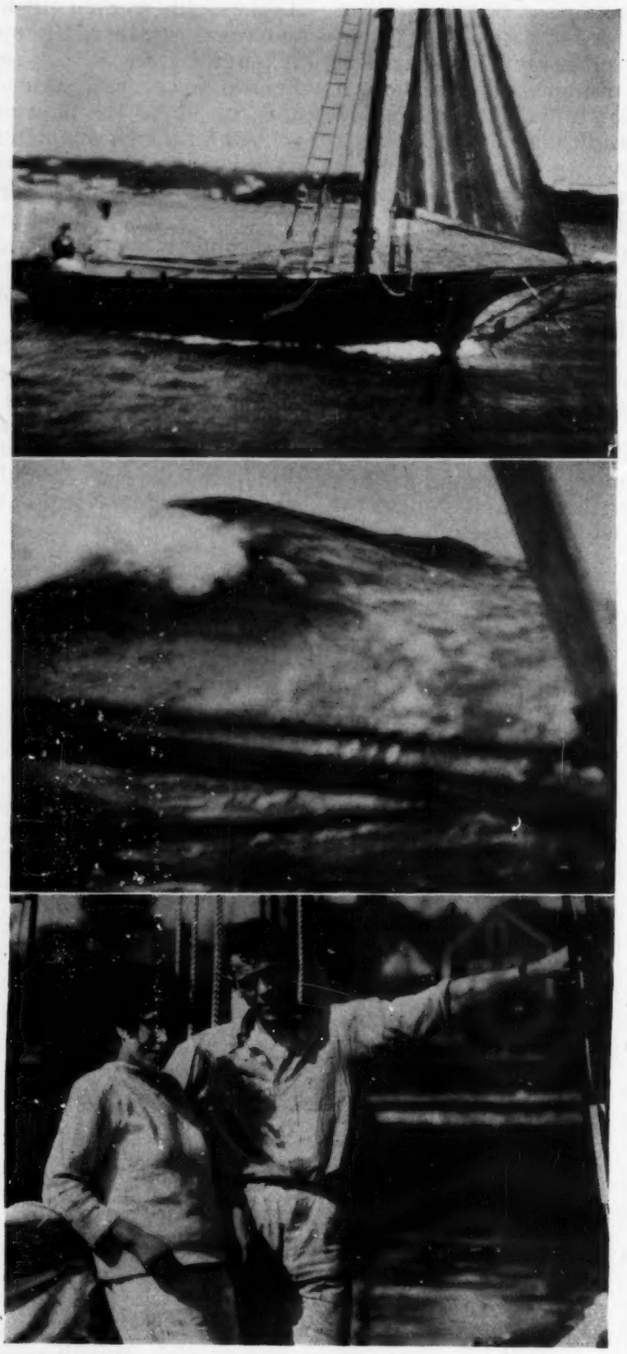
Having taken our motor down in Horta and set it up again, apparently in good order, and with all the gasoline

we had taken on in Bermuda, we were in better shape than ever. Our gear showed no sign of weakness from the wear of the 2000-mile run, although we had not taken any extraordinary precautions to protect it. Since we travel to see what we can see, we planned a stop in Ponta Delgada, which was practically right on our route to Gibraltar. A coasting schooner without power left Horta the afternoon before we did. So when we pulled out the next morning, having paid a ridiculous amount for pilotage fees and miscellaneous charges, we started under power in a calm, hoping to catch her. It was ten hours before we had a sailing breeze, but when it did come it was abeam and strong all night, and kept us going along at something better than six knots.

In the morning the wind headed us, but we reached the lee of St. Michaels soon after and kept up a good pace, even though we had to beat to windward. Not having caught sight of the schooner, we thought we must have been badly beaten in spite of our motor, until, in the afternoon, we rounded into Ponta Delgada harbor, traveling fast with a double reef down, and found we were there first.

However, we were sewed up by a stiff E.N.E. wind for some ten days. So our good progress stopped right there. But when that schooner came in and we found that she had drifted well south of her course during the calm and then had had a real fight to get up to the island, taking four days to cover the 150 miles, we were glad that we had had our hook in the mud and at least were not going backwards, as we most probably would have done had we been outside.

When we did pull out, on a change of the wind to the S.W., we had a pacemaker again. This time a schooner that had just made the 800-mile run from Lisbon in four days was leaving the day after us for the return trip. As the skipper's advice to me, and the sailing directions, advised making the run to Gibraltar by running magnetic east to about 39° 30″ North and then following that latitude to the Portuguese coast before cutting to the south, we agreed to sail the same course, if possible, and see where he could catch us. That course was meant to take full advantage of the "Portuguese trades." During the first day and a half we reeled off knots in perfect sailing weather, a fresh breeze on our quarter and a sea with just the right amount of lift. That gave us a good start, and we planned to give the schooner a long stern chase. Planning is as far as we got. After a few hours of calm, the wind came up strong from E.N.E. again and 38° 50′ was the farthest north we ever got. Of course, we never saw the schooner again, since neither of us could hold the course we planned.



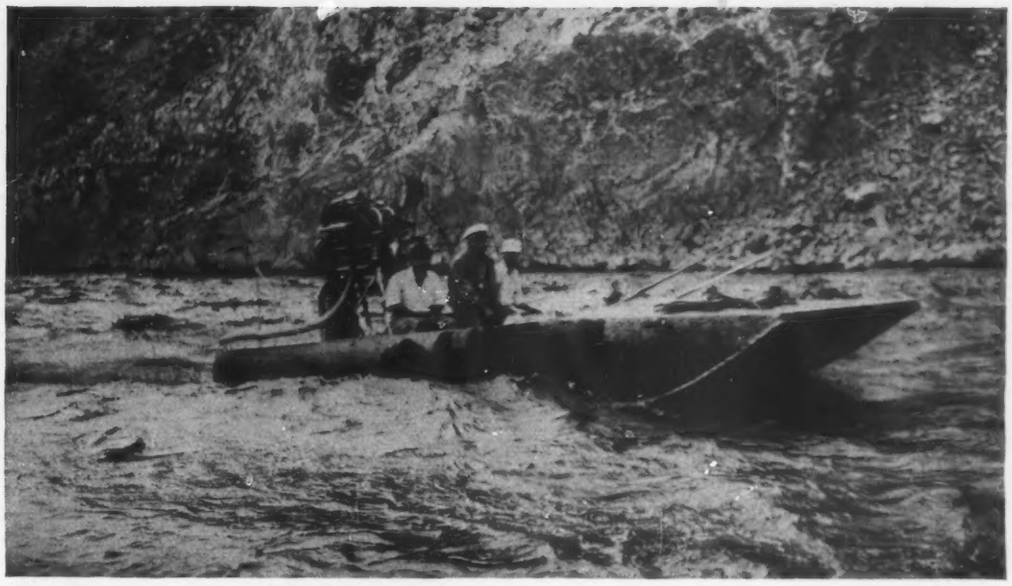
(Top) Underway from Bermuda, bound across the Atlantic. (Center) A cresting sea in mid-Atlantic. (Bottom) The skipper of "Ochito" and Mrs. Crowley, the "staff captain"

Knowing that, by all the rules, the further south we could keep the better off we would be when the wind backed toward north, as it could be expected to do in Longitude 15, we kept on the port, or long tack and hung on as close to the wind as we could. The weather chart showed that if we allowed ourselves to be carried too far south we would almost certainly get dead head winds right in to the Straits. We worked hard enough on that theory to deserve some success. I wouldn't attempt to say just how hard the wind was blowing. It is too easy to sound like a liar when you are only a bad guesser, as all yachtsmen know. But the sea was irregular, and under double-reefed mains'l and reefed jumbo *Ochito* plunged and shivered and threw spray as high as the peak of the mains'l, but kept going to windward.

That sort of going was too strenuous for both boat and crew to keep up for days on end, so we dropped the jumbo. That eased the boat tremendously. Only odd caps now and then came on deck, and we jogged along very slowly, halfway between sailing and being hove to. It was rather difficult, in fact, to keep pointed within four or five points of the wind and keep steerageway.

But we were making some sixty miles a day, holding a good course about S.E. by E., and riding safely and as comfortably as could be expected without using sea anchors and drifting to the S.W. Of course, we were looking for a shift all the time and expecting it daily as we neared the 15th meridian. But the shift didn't come.

(Continued on page 84)



The "Powell" going up Hualapi Rapids. With a cliff on one side and a rocky bar on the other, these rapids add spice to a venture up the Colorado River

Up the Lonely Colorado

From the Site of the Hoover Dam to Grand Canyon

By WILLIAM BRUNER

NEARLY one hundred miles above the site of Hoover Dam we turned around. The sandy-haired chap at the wheel shook his head. There was at once triumph and disappointment in his grin. "This is further upstream," he said, "than any one has ever gone by boat before."

The soaring ramparts at the lower end of Grand Canyon immediately acquired new charm; there had been grandeur enough before, and overawing beauty. Farthest upstream! Each of us felt that this part of the river was peculiarly his own, despite the fact that ours was a short trip, innocent of danger and hardship — and yet a sprint which would have changed the opinion of one Lieutenant Ives, and perhaps brought from him an envious sigh.

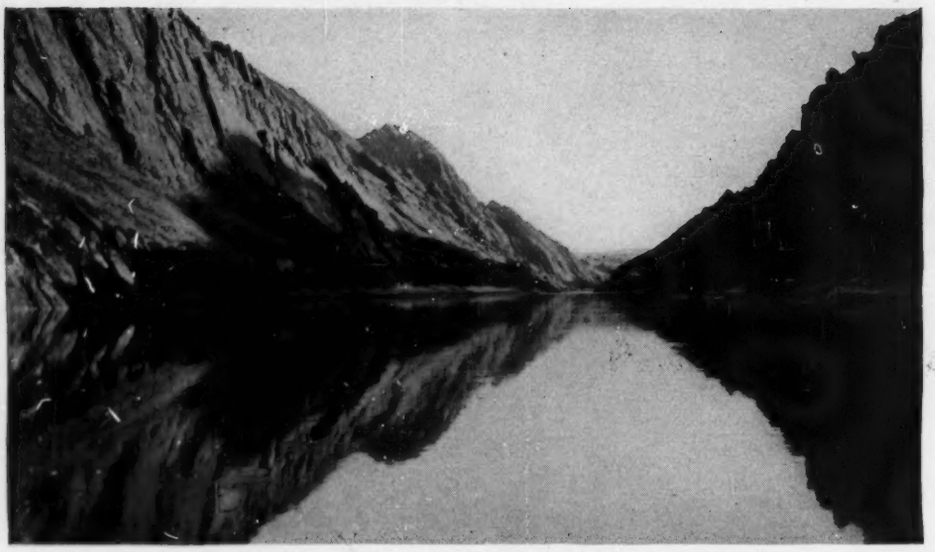
Called the most treacherous of rivers, the Colorado merits special boats. It is replete with sandbars and submerged rocks, rapids and shifting channels; and it carries suspended enough silt to haul down the strongest swimmer unless he is quick about getting out of his clothes. Striking terror and consternation into the hearts of its early beholders, it remained unexplored for more than three centuries between the day of its discovery by Spanish Don Lopez de Cardenas and the time that one-armed Major John Wesley Powell, against warning and advice, plunged through the mile-deep gorges on what is probably the most perilous boat trip ever accomplished.

Following Powell, many expeditions, for varying purposes, have started above Grand Canyon and floated through. Several met with disaster, death; not one had an easy time of it. Those with special craft fared best.

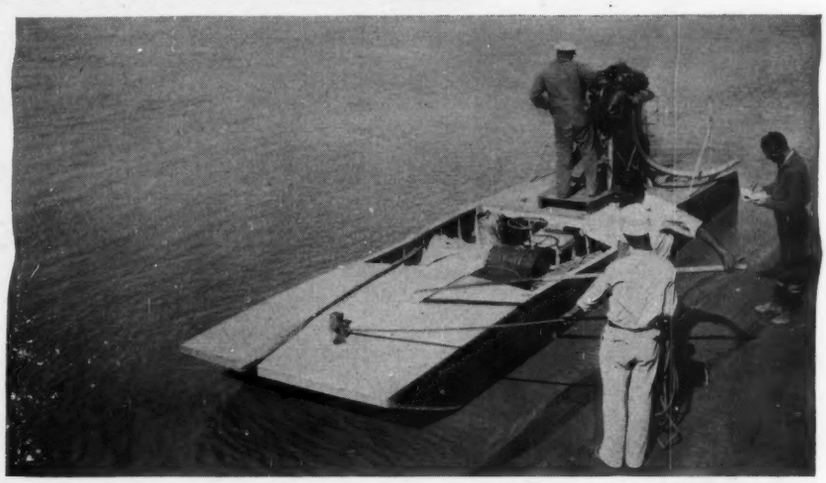
We were interested, therefore, in learning what our particular boat could do. Its like had never been seen on the Colorado before. Too, we wanted to learn what sort of country would be visible to future cruisers on the great reservoir which will eventually form behind Hoover Dam.

Starting at the head of Black Canyon, two miles above the roaring spot where the work of building the dam is pushed day and night, we were soon past Vegas Wash. This was as far as Lieutenant Ives got when, in 1858, he sought to learn whether the river might be used as an artery of transportation into the opening West. Starting at the mouth of the river, in three months he had brought his iron stern-wheeled steamer — built in Philadelphia for the purpose! — only as far as Black Canyon. This, he decided, must be the head of navigation, for his *Explorer* made but twenty miles in the last five days. Ives wrote, at that time: "It seems intended by nature that the Colorado River, along the greater part of its lonely and majestic way, shall be forever unvisited and undisturbed." Airplanes had not been invented then, nor airplane motors; and the dam was yet to be desired.

Like Ives's boat, ours had been specially built for the Colorado. Designed by Murl Emery, now of Aladdin-like Boulder City, the new *Powell* embodies experience as well as experiment. Known as the "Boulder boatman" in the pre-construction days when he carried bold senators and tourists down to the dam site, Emery has lived at the head of Black Canyon since 1918 — part of the time on a shantyboat. He respects the river, and has adapted the *Powell* to its requirements. Even so, its immediate predecessor — with a hull of electrically welded auto-body steel — was a failure. Vibration was against it, and the deplorable fact that it could not develop speed. This was followed by a wooden hull, of



Iceberg Canyon. On this part of the Colorado many still reaches exist between the rapids, which in effect form a series of small dams



Named for the first explorer of the Colorado's chasms, the "Powell" proved herself a worthy river boat

modified inverted-V type construction. *Six weeks' work by three men saw its* ten thousand brass screws driven home, and a strange new craft on the Colorado. Built of spruce planking on an oak frame, the *Powell* is scarcely more than a shallow box, 24 feet long with beam of 7 feet. The freeboard forward is 26 inches; aft, 16. Maximum draft is *7 inches. A roomy cockpit occupies the midships section, with ample decks at* either end.

Power is provided by a Curtis OX-5, which is mounted above the after deck on two-inch steel tubing. A seven-foot pusher propeller enables the boat to develop an approximate speed of twenty miles an hour.

Here, at once, several river hazards are overcome. Driftwood and sandbars cannot harm a screw which does not exist. The lightness of the boat's construction, coupled with the shallow draft, reduce the danger from collision with hidden rocks. The rudder is designed to kick upward when it strikes an obstruction — a happy provision in water so heavily silt-laden that it is impossible to see below the surface. The rudder itself is hinged in a slot, and is so hung that, when turning upward, no part of it swings on an arc below its normal depth.

This, then, was the *Powell*, latest of a noble line of river boats. We were anxious to see how well she would live up to name and tradition on her short but strenuous shake-down cruise.

We traveled light. Besides Emery, there were Elton Garrett, Boulder City newspaperman, and three ordinary mortals — Al, Bub and Bill. Garrett, a talkative soul, was distressed when the motor started to roar, blotting out his voice. He solved the problem, finally, by jotting his comments on slips of paper.

The first part of the trip was through fairly open country. Here is situated old Callville, once a Mormon fort. Solidly built of native rock, it stands bleakly alone on a low promontory, with scores of carved initials testifying to its long abandonment. But soon the hills creep down on the river, becoming more and more perpendicular, and finally resolving into the massive cliffs of Boulder Canyon. Unlike Black Canyon, Boulder possesses a serene, dignified beauty. Its walls are not so abrupt nor so ominously swart; it has stretches of sandy beach where desert willows thrive, and where sage, cacti and mesquite are abundant.

It is twenty miles to this point — an all-day trip in one of Emery's earlier, more conventional motor boats. The new *Powell*, driving ducks and herons before her, made the distance in less than two hours against the seven-mile current. I looked here for our old friends, Castor and Pollux, two marooned burros, left here when one of the canyon's small mines was worked out. Towering walls and river had combined to form their own peculiar Scylla and Charybdis; they could not escape. Their eager advances when we camped here on that other occasion were touching, though our sympathies were clouded somewhat by their ambitions to get into our grub. What has become of them, I do not know. Whether they Grew Tired of it All and took the river way out, or whether they were otherwise removed will probably remain a mystery.

Boulder Canyon initiated the *Powell* to rapids. As though anxious to prove herself, the boat skimmed over them with such ease that it was almost disappointing, and even the treacherous Reverse Rapids were snarling behind us before I realized that we had passed over them. On that other trip, at higher water, I began to think I might achieve the uncomfortable distinction of being seasick in the desert, for our only progress seemed to be up and down. My admiration for the new *Powell*, therefore, was fast turning to marked enthusiasm.

The Virgin River, almost dry at this fall season, enters the Colorado a few miles above Boulder Canyon on the Nevada side. Here, again, the country is open — a vast panorama of amazingly twisted and wonderfully colored mountains meets the eye on every side. Distant smoke-blue peaks reach into turquoise sky. The nearer foothills are vividly stained, as though some Titanic artist, wearying of his palette, had dashed his pigments against the earth.

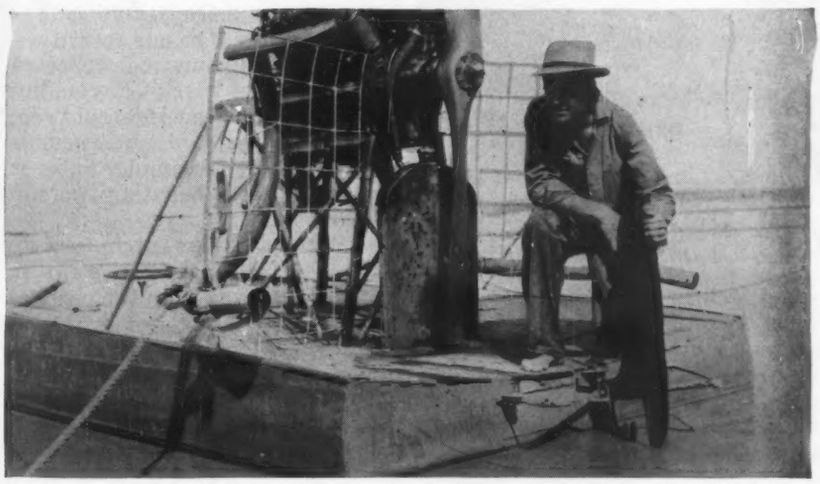
Just above the Virgin is Rioville, site of the old Bonellis Ferry. Like all the works of man along this lonely river, the place is in ruins; but elaborate fireplaces, shreds of wallpaper, and remnants of carved woodwork indicate a one-time elegance which could have been achieved only at tremendous expense and labor.

A short distance above Rioville we passed a man who was putting a boat into the water. It was not a river worthy craft from the looks of it, being built, apparently, of old lumber and tarpaper. Bound for Temple Bar, eleven miles upstream, he must wade against swift current over bottom which is alternately rocky and muddy, dragging his load of supplies. When he waved, grinning at us, we flattered ourselves that he wished for a boat like ours. Upon learning that he made only twenty-five cents a day panning gold at the Bar, we decided that he probably knew best what sort of boat he needed. When we passed him again, two days later, he still had a couple of miles to go. Young, whiskered and cheerful, if solitude and a scant, untroubled existence are what he desires, our acquaintance certainly has them.

Toward noon a gusty wind came up, retarding the boat, heating the motor and kicking blow-sand into our eyes. This sand is so fine that it can be blinked out with little agony; and when seen against the sun, it resembles steam rising from the boulder-strewn bars.

Now, suddenly, a new vista is revealed as we roar around a bend. There, serene and tall, rises the Temple. It is a great block of red-brown conglomerate, almost cubic. Erosion has fluted its sides, adding to its cathedral-like appearance. Monoliths of sandstone rise from the water's edge, reminding one of stolid guardians — or lions before a public library.

Here the river makes a bend around Temple Bar, a name which may be sadly recalled in Great Britain. An English company once hoped to take gold from these washes. A 600-gallon pump was installed, and there it stands today, rusted and forlorn. When all was ready, came the disconcerting realization that there was nothing to burn. Undaunted, the Englishmen sent to Flagstaff for timber, secured chain, and built a boom. This caught ample driftwood, and visions were gilded until work with the monitors proved that gold did not exist in paying quantities. Pictures of the project, if any were sent back home, must have charmed the stockholders — a wide river in the foreground backed by the lofty Temple, looking as though nothing in this world could ever disturb it. So much for the Temple. It is destined to become a wave-lapped islet — an astonishing end for a desert butte.



Near by is Old Senator mill, another monument to abandoned hope. Here, too, a ferry once operated. It has gone the way of most other Colorado River ferries — unexpectedly downstream.

Knowing that we could not reach our destination on the initial fuel supply, Emery had sent a truck around to meet us at Temple Bar. The river distance was 33 miles, but the truck traveled 75 over desert-mountain road. One drum of gas was taken on, and another left against our return. This, we hoped, would enable us to reach the Flour Sack Rapids — of such fierce reputation that we doubted if we could get above them.

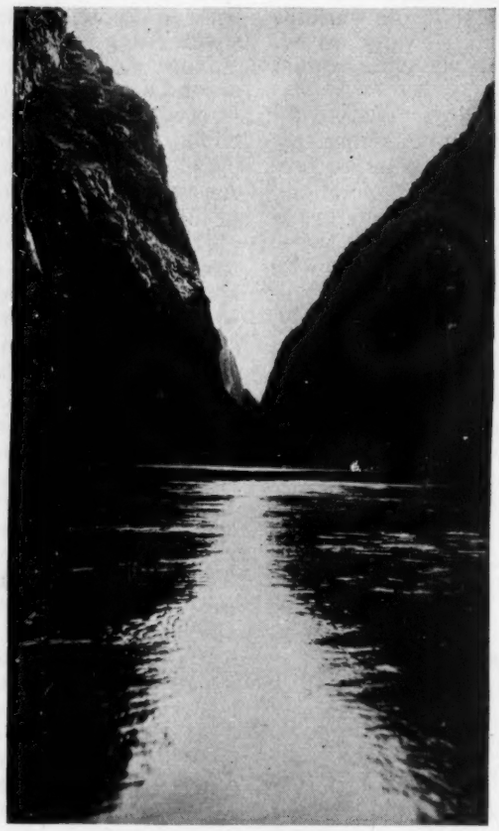
The designer of the "Powell" demonstrates the manner in which the rudder tilts up when it strikes an obstruction

From the high bluffs of Travertine Canyon one catches the full enchantment of the Colorado

Leaving the Bar, we were scarcely over the next swift water when a loud crack startled us all. Something had come off and hit the propeller! Gasoline at once began to squirt about in a most alarming manner, and the coughing of the motor was not reassuring. Losing headway, the *Powell* immediately started to drift toward the dangerous water below.

It did not take long to locate the trouble, which at first glance seemed serious enough; the check valve on the fuel pump had worked off. Though it seemed hardly possible that it had been knocked within the boat, with all that muddy river at hand to receive it, we staggered to shore for a none too hopeful look. Eventually we found all three parts of the missing valve, scattered widely. Emery maintained that we had used all our luck; that, as reasonable men, we should turn back. He was wrong. We had luck to burn — more luck than gasoline.

Presently we lost another part — the radiator cap — which struck the propeller with an even louder crack than the check valve had produced. The cap went overboard, but that was no loss compared to a possibly shattered propeller. Striking the metal-sheathed tip, it left a deep dent, but did no further damage. There was nothing more, evidently, for the *Powell* to shake off; she went through without further mishap.



Deep in the narrow gorge of Grand Wash Canyon, the river flows through a world of perpetual darkness and twilight

Passing through narrow Virgin Canyon, we presently encountered our worst rapids — the Hualapis. Two of us got out to lighten the load. Then, with his remaining two passengers crowded as far aft as they could get, Emery gave the boat the gas.

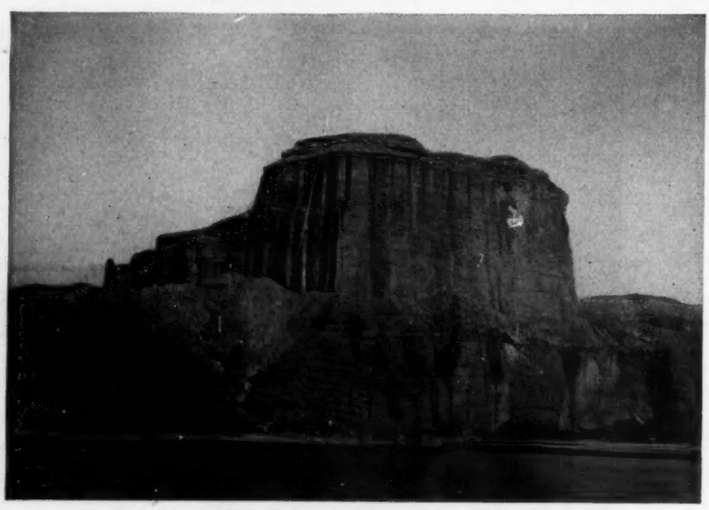
The water was swift, boiling. It seethed and curled in intricate patterns. There were no tall waves, though some must have been a couple of feet higher than the sides of the boat, but there were scores of submerged rocks, showing slick, ominous lumps where the water went over them. On the Arizona side curved a stony bar; the Nevada side terminated in a plunging cliff, where the boat, in case of mishap, might be swiftly smashed, drawn under and ground to bits.

Roaring into the rapids, the *Powell* pitched and wabbled, seemed to hesitate, to take hold of herself — and then, actually, she seemed to rise to the tops of the waves and skim over them with all the aplomb of an experienced duck. Not one drop of water was shipped. We knew then, that for all her box-like shape, the *Powell* was a river boat.

Above here is an old ranch, where dates and pomegranates grow, attesting to the mildness of the canyon climate. The owners were surprised to see us, thinking, from the noise of our approach, that we were an airplane. Man and wife seemed to be contented, though they must have visitors but seldom. Evidently they have little to do but hunt and fish, and wait for the dates to ripen.

Game, in this country, is plentiful but not over-abundant. It is a summer resort for mountain sheep, but we saw none; with the coming of fall rains, they go back into the hills. On our former trip, in late spring, we saw at least seventy in the course of a morning; but this time we searched the heights in vain for a glimpse of the big fellows. Ducks, cranes and herons were numerous, forever flying before us. On our return we had several hundred collected as we neared Black Canyon, but they finally wheeled and went back upstream, doubtless more afraid of the incessant rumble at the dam site than they were of the boat.

With darkness upon us, we camped on a sandy strip in Iceberg Canyon, which takes its name from the peculiar formation of the cliffs. An enormous pile of driftwood provided a fire which burned all night, giving appreciated heat, for an October chill was in the air. Our shelf of sand possessed no spring, and the river water seemed scarcely suited either for coffee or the *Powell's* radiator. Riverman Emery was not concerned. Dipping out a kettleful of water from alongside the boat, he stirred a tablespoonful of evaporated milk into it. Within a couple of minutes the milk had coagulated and carried all the silt to the bottom, leaving the rest clear and palatable. Emery claimed it was an old trick, but it was new to the rest of us.



The Temple, which will probably become an island when the lake fills behind Hoover Dam

Up long before dawn, we left the camping gear and headed upstream again. Presently we passed a stone monument, indicating that we were now wholly in Arizona. Grand

(*Continued on page 78*)

A Modified Downhill Cruise

By ALFRED F. LOOMIS

ALONG the Atlantic Coast a true downhill cruise, in which one sailed only with sheets eased, might last all summer and conclude finally with a tremendous run home before a northeast gale. Having no liking for gales and having, moreover, only a week at our disposal, my wife and I dismissed the tempting thought of cruising always with the wind abaft the beam and set out from Marion, Mass., determined to use the motor when-as-and-if. But we started in authentic downhill fashion.

It had been our intention to shove off for the Cape Cod Canal, lie the night a few miles removed from the beseechments and demands of our children, and in the morning proceed to Provincetown. With a fresh breeze from the northwest, Nantucket seemed a more alluring objective. So, late in the afternoon we poked *Hotspur's* nose out of Sippican Harbor and fell away for Wood's Hole, sheets well to port and the little cutter riding comfortably under main and working forestaysail. In this short run across gusty Buzzards Bay my thoughts were occupied with expected currents and probable maneuvers in the Hole, but these, as it happened, were not what almost brought us into trouble.

Damn a large man in a bright red sweater who anchors a rowboat near where I expect to find a nun buoy! *Hotspur* had been illegally entered and relieved of my binoculars before the start of our cruise and my naked eye incorrectly informed me that the rowboat was tied to the freshly painted nun. Fortunately, the real buoy revealed itself before we had gone very far into the shoal water off Uncatena Island, but in another two or three minutes the large man with the red sweater would have had plenty to laugh about. P. L., who takes the outset of a cruise rather seriously, thought that a law ought to be passed to prevent men from masquerading as nuns. I told her that there is a strong current of opinion toward the repeal of existing laws, and that any attempt to prohibit red sweaters in the state of Massachusetts would be met by a storm of indignation.

This matter having been settled, the wind obligingly backed into the west and with the commencement of the flood current under us we sailed through the Hole without having to jibe. Out on the other side we found the wind in the southwest, but it was still abaft the beam and we reached in to Vineyard Haven without incident. This was my first visit to the little harbor, although I once passed the better part of a night in a schooner stranded on Hedge Fence Shoal, when I had a very good opportunity to study the lights of West and East Chop, occulted at times by the sails of competing cruisers as they raced by with fair wind and tide. I learned then, as I had previously suspected, that if a boat draws seven feet it is good seamanship to keep away from seven-foot shoals.

On *Hotspur's* next day's run to Nantucket across a strong southwesterly I came near learning something else. With the day and wind fair and a steamship course laid out on the chart, I paid little attention to currents until after we had left Cross Rip Lightvessel well on our port quarter. Tuckernuck Shoal buoy failed to show up according to schedule, and when I awoke to the necessity of cross bearings and a sounding with the lead I discovered that we were on top of the shoal, with twelve or thirteen feet under us. That, no doubt, was why the sea had suddenly roughened, bouncing us about and spilling aboard occasionally over our starboard quarter. Since we were on the shoal and a mile or so from the only spot that approached our draft, I made belated allowance for the ebb current streaming toward Muskeget Channel and laid a course direct for Nantucket Harbor, whose beacon and bell were soon visible.

I had never been to Nantucket — but that is not to say that I was anxious to get ashore to see the sights. A certain amount of experience in sight-seeing has taught me that a stranger never sees the proper places. He puts on his shoes, goes ashore, dragging his tired dogs under him, and gives everything the apathetic once-over. Then when he gets home and tells about his travels somebody is sure to say, "What! You didn't see McGinty's!" (Or the Taj Mahal, or Cape Horn, as the case may be.) "Well, you might as well have stayed aboard."

That's the way I feel, although a certain amount of visiting from boat to boat is always in order. *Seafarer* lay just ahead of us at anchor, my old friend Judge Coffin restlessly pacing the deck as he did in the Bermuda race of '23. I wanted to go aboard to ask him about the cook who was so indisposed in that race that we hopefully memorized the service for burial at sea. The Judge informed us that there would be a continuation of southwesterly weather on the morrow. I suspect that the Judge, who was westward-bound, was trying to invoke northerly airs by predicting southwesterly ones. At any rate, we were up early and away before seven, bound for Monomoy and the outside of Cape Cod, using the motor to carry a tide through Nantucket Sound, and hoping that some flannel chafing gear that I had recently bent to our spreaders would be put to good service. Alas for such hopes! When the morning calm gave way to a riffle of air it was northerly, and so it continued until well into the afternoon.

Having been warned by the sweep of the current the day before, I went into the slue off Monomoy Island with the motor running and eyes wide open. The course from Stone Horse Lightship to clear Bearses Shoal on the one hand, and the shallows offlying Monomoy on the other, was N.E. by E., with a stern range on (or, more exactly, between) two buoys to guide us. By the time we had left the lightship half a mile astern we were steering N. by W. to keep the east-northeasterly current from setting us on Bearses Shoal. So steering, and making five knots through the water, we were able to keep west of a line between the lightship and a standpipe at Chatham. But, as usual, my heart was in my mouth. Pity the man, say I, who tries to sail through this short cut in light airs or attempts it under any motive power when the visibility is bad. Once clear of the shoal on the starboard hand, we had to alter course abruptly in that direction to clear a four-foot spot making out from the Cape, over which the swells heaved disturbedly.

They say that time passes quickly in periods of mental stress, but I have never heard that this unrest is communicated to timepieces. Nevertheless, our cabin clock gained an hour during the morning and stopped of an overheated bearing when its hands pointed to

twelve. The motor kept on ticking away until three o'clock by my watch, when I stopped it to clean a plug, and on sounding the tanks found that we had less than two hours' running left. We were by this time north of Nauset Beach Light, and there was sufficient westerly bend in Cape Cod to permit us to sail a long leg on the starboard tack and a short one on the port. But there was hardly enough wind to put the sails to sleep and it began to look like a lengthy day.

It looked more like it when the wind fell away to a flat calm and the current turned against us. Cape Cod is one of the longest and least interesting stretches of sand I know, and we got to know it pretty well by evening. To give us a slight change of scene we started the motor on the port tank and ran it dry in ten minutes. Then, at seven, the predicted southwesterly came in (from the south) and with mainsail lowered I set the balloon jib to starboard and the spinnaker to port. This was fun for the two hours that it lasted, for making the spinnaker spill into the ballooner in a two-knot breeze is like driving a team of mules. Handle them right and they behave beautifully. Forget them for an instant and one balks and then the other. To drop the metaphor, both sails collapse and the boat loses headway.

P. L., who is the best helmsman I know, had an hour of this amusement while I slept, and at dusk called me with the news that our course around the Cape had so much westing in it that she could no longer fill the spinnaker and that, moreover, there were bubbles at our bow for the first time in six hours. I got in the light sails, saturated with dew, set working sails, and for fifteen or twenty minutes it looked as if we were going places and seeing things.

But even with a fair tide and the expenditure of our last gallon or so of gas it took us four hours to cover the last ten miles to Provincetown. The close reach from Cape Race down to Wood End was marked by numerous harrowing escapes from fish traps — for we were unwilling to go an inch farther offshore than we had to. Yet the mewing of sea gulls gave us warning of each trap as we approached it, the moonlight helped to keep us clear, and we eventually came to anchor with no nets draped around our bowsprit.

Provincetown is one of the towns that P. L. may never see. We lay in harbor all day while I dried sails and varnished here and there, and it was our firm intention to have dinner ashore. In mid-afternoon, however, when a southwesterly was kicking up a chop, we were requested to change anchorage to make room for a steamer to back clear of her wharf. Wherefore, with our last quart of gasoline, kept in a glass jar for such an emergency, we went alongside a fuel barge and took on plenty, then shifting to the lee of Long Point for a quiet night.

Here we had opportunity to see how sedulously the Coast Guard (often execrated in these closing days of Prohibition) performs the helpful service for which it was created. The water is deep within a few dozen yards of Long Point, and using the lead, I went in until we were in two and a half fathoms, there anchoring at the top of a nine-foot tide. Fifteen minus nine leaves six, and *Hotspur* draws better than five — so, before rowing ashore to ask permission to telephone from the lighthouse, I sounded outside our anchorage, and took bearings of where we could lie in four fathoms, but still far enough from the ten-fathom depth to satisfy me that we wouldn't drag over the hole.

(I did that once: Anchored by chance on the very edge of a deep hole that had been dredged to obtain sand for some construction work. A breeze came up when everybody was ashore, and in settling down to the business of digging in, the anchor slipped over the rim of the shoal and hung straight down from the bowsprit of my old *Hippocampus*. If Joe Chambers hadn't chanced to row aboard a minute later, almost anything unpleasant might have happened. When he got to her the *Hippo* was complacently embarked on adventures of her own.)

Before changing our berth on this occasion we rowed in, telephoned home, reversed the charges, and learned that only one child had stepped on a rusty nail during our absence. Then the lighthouse keeper, who had secured the connection for us, said, "By the way, the station at Race Point warns me that you are anchored too close to the beach and had better shift at once." Which certainly comes under the head of service.

We made the shift, passed a quiet night, and in the morning set sail for Gloucester or points east or west, for the success of a downhill cruise depends on one's willingness to be directed by the elements. I wanted P. L. to smell Gloucester, but if the wind had been ahead the aroma of sanctity hovering over The Hub would have done just as well. As it happened the wind was fresh from the south, so that any harbor in Massachusetts Bay was ours for the asking. But the overtaking sea joggled us less on the course for Gloucester and thither we sailed, mainsail to starboard and staysail "wung" out. Astern of us as we left Race Point we saw a 50- or 60-foot schooner whose tactics seemed to indicate that she also was testing wind and sea for an easy sail. After watching our course for a mile or so she made off with a little more westing, apparently for Marblehead.

We ran all day, losing track of the schooner, and in the late afternoon when we were two or three miles from Eastern Point I looked astern and there she was again, on the other jibe and apparently bound for Rockport. But presently, when she was a mile to the eastward of Eastern Point, she tacked about and stood in for Gloucester. So she had been beating down wind, and while we had run almost dead before it for 35 miles we had about held our own with a schooner twice our size.

I don't suggest for a moment that tacking down wind is not the best way for a schooner to sail to leeward. We weren't either of us racing, and for all I know to the contrary the schooner put in at Marblehead before coming on to Gloucester. But it is always pleasant in sailing a small boat to keep even with the big fellows. One observation I do have to make about this unknown yacht's tactics — when broad reaching she tacked instead of jibing.

I hope that some day someone properly qualified to do so will write a treatise in defense and praise of the jibe. As I see it, there are three proper times to jibe — first, and always, when a man falls overboard; second, when in running it becomes desirable or necessary to alter course to leeward; and third, when one is shortened down, sheeted flat, and bucking hard into head wind and sea, and desires to change course to weather. These three occasions when it is better to wear than to stay come pretty close to bridging the extremes of deep-sea cruising. Yet the fear of an unintentional jibe is so firmly implanted in the minds of many yachtsmen that the maneuver is rigorously excluded from their book of seamanship.

P. L. found the sights and smells of the wharves at Gloucester all that I had cracked them up to be — which, in sum, compensates for the lack of charm ashore — and in the morning we picked a lovely northerly air for our deferred run to Boston. Before we were clear of Ten Pound Island the wind had backed to the

west, but the day was perfect for all that. *Vanitie* and *Weetamoe* were racing out of Marblehead as we passed by, all the other yachts in commission on the shores of Massachusetts Bay were sailing its smooth, wind-flawed surface, and we found that under main and balloon jib we could generally sail the course for The Graves on the starboard tack. A downhill cruise would be pretty flat without an occasional day like this when the fluky wind calls continuously for helmsmanship and differences of trim.

"Damn a large man in a bright red sweater who anchors a rowboat near where I expect to find a nun buoy!"

Passing The Graves we changed to working jib and staysail. The tide served and helped us, with a little judicious pinching, to work up between Boston Light and Point Allerton without shift of tack. An excursion steamer which, between glances, was swallowed up by dry land, showed us the way between the point and Peddocks Island, and we followed after to run dead off on a rising tide to Hingham. With the courage which a three-quarters flood gives to visiting strangers, I was prepared to go right up to the head of the marshes and toss a request for a supper invitation to the doorstep of our friends, the Wambaughs. But we were spared this indiscretion. A Friendship sloop with black hull and questing bowsprit appeared from the direction of the Hingham Yacht Club. When she was near I consulted the Cruising Club yearbook and called out, "Is that the *Coot?*"

It was. Were there any Wambaughs aboard? All Wambaughs, with the exception of one who was a friend. His name I shan't give because I want to quote him. When both boats were moored off the yacht club our friends came aboard for ginger ale and wassail, and our friends' friend made remarks about yacht club racing. Perhaps it was the wassail, but at the moment the name of the club he may have had in mind escapes me. So maybe it was any club in the United States. Or maybe not. Anyway, it appears that the afternoon racing which seems so spirited, jovial, and friendly to an outsider like myself is a festering sore of jealousy, bickering, and bad sportsmanship.

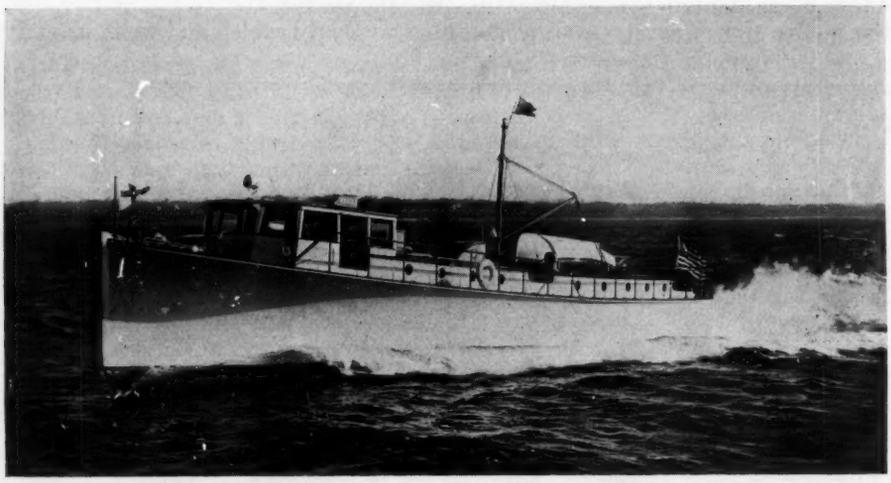
Boats that foul don't instantly break out withdrawal signals as they do, for instance, in Scandinavia. Not much. Our boats sail right on, and it takes a jury of twelve who have been fouled to disqualify one of those who fouled. . . . And then the rows between members of a crew, and the controversies about buoy room and overlaps. . . . And the whispers.

Another morning northerly cooled and woke us early, but died before we were underway. So we motored all but ten miles of the way to the canal and there jogged off and on, watching the National Guard shoot at a silvery target towed by an airplane overhead. They shot pretty well, but not so well as to harm the target.

Vanitie, bound for Newport, was waiting for the red light to change to green at the canal mouth, and when she got the signal we started through together. In tow of her tender, *Utilitie*, she soon overtook us, and this was one attack of canalitis in which I didn't have to worry about the bridges. They opened, though all Cape Cod's motordom choked the highways. Quite a sight it must have been for the bridge-bound motorists — one of the best of the nation's yachts slipping gracefully between the sandy banks of the canal — and the other one following close behind.

So in the evening we came back to Buzzards Bay, finding the wind blowing with its accustomed vigor. It was dead ahead when we left the canal, and as this was the last of an almost-downhill cruise we kept the motor running and the sails furled. Pocasset, just around the corner from Wings Neck, offered a convenient harbor of refuge — a last refuge, I might explain, from the responsibilities of a family. We had a day up our sleeve that we had saved for bad weather, and at anchor we spent it, I doing odd jobs on deck while P. L. got the rest that we had started after the week before.

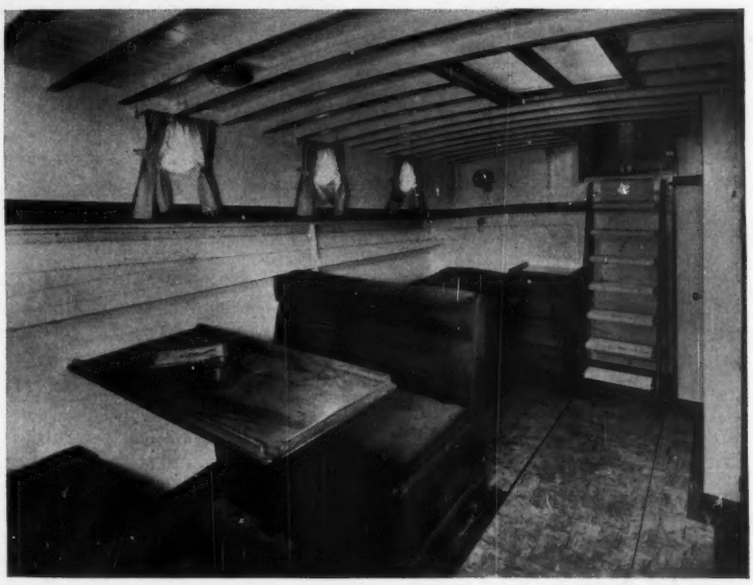
Cruising, she tells me, is not a restful occupation. Not, at any rate, if you subscribe to our theory that good weather must always be played to the utmost. But I tell her that it puts you early to bed and early to rise, and that, according to the adage, makes you healthy, something-or-other, and wise. What is that missing word? It's so many years now since I've heard anybody use it. . . . At any rate, we finished our downhill cruise with a tin boxful of golden recollections.

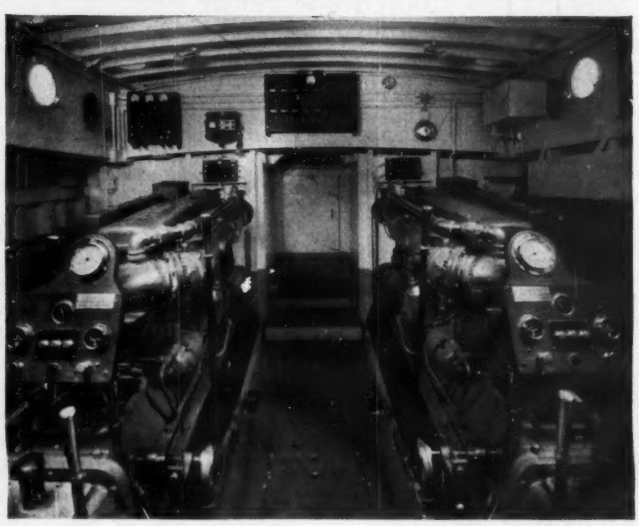


"Renba"

An Offshore Express Cruiser 60 Feet in Length

Built this year for a Boston yachtsman, "Renba" is now in southern waters. In underbody form she is modeled upon the Coast Guard boats which have been turned out by her designers, Eldredge-McInnis, Inc., of Boston. This model is one capable of being driven at high speeds in rough water. In interior layout "Renba" is unusual, and the arrangement is one which has much to recommend it. On a length of 60' 10" the beam is 13' 6", with draft of 4'. With a power plant of two Hall-Scott "Invaders" of 275 h.p. each, "Renba" has a top speed of 22 knots and a cruising speed of 18. Lamb & O'Connell were the builders.





Photos by M. Rosenfeld

Navigation Simplified

By

CARL L. WEAGANT

IN THE December issue of YACHTING the relation between time and longitude was thoroughly covered, and it was shown that a difference of time of one hour was equal to a difference of distance of 15 degrees. With this fundamental background we can take up the final step in the problem of determining longitude at sea, namely telling time by observation of the sun — the time sight method.

The time sight method involves the solution of a spherical triangle, but first we shall solve the problem and consider the theory later. So for the moment let us consider ourselves at sea. What steps do we take to find longitude, or, in other words, tell time by the sun?

For a time sight the sun must be observed when it is bearing approximately due east in the morning or due west in the afternoon, on the so-called prime vertical. You can readily determine when the sun is bearing east or west by taking its bearing from the ship's compass, or else by looking up the sun's azimuth in the azimuth tables for the latitude of the ship. We shall assume that we are taking an afternoon sight and have been watching the sun over the compass until it bears true west, not magnetic west.

There are three values to be recorded: the altitude of the sun above the horizon measured with the sextant, the chronometer time taken at the instant the sight is made, and the log reading. Usually the navigator takes the sun's altitude and an assistant stationed below reads the chronometer when the navigator shouts "mark" or "time," at the instant that he brings the sun in proper contact with the horizon in the sextant. Some navigators carry a watch in their hands and read the time themselves, having first set the watch with the chronometer.

It is highly advisable to take a series of four or five sights and the corresponding times at equal intervals of about two minutes. By observing the sun at equal time intervals an error in the altitude measurement will readily show up by comparing the altitudes with one another. That is, if the altitudes do not increase or decrease by approximately the same number of minutes between each sight the altitude that is incorrect will stand out. This procedure, however, is not entirely necessary and, in heavy weather or on a cloudy day when the sight can be taken only at the moment when conditions permit, sights at equal intervals of time will be impossible. Furthermore, any error in the sights will show by checking the final result of individual problems worked from the different sights. Some navigators average the time and altitude of three sights and work one problem, but I think it is better to work two problems from two different sights, and, if they do not check, then work a third or even fourth problem until you secure two longitudes which do check. By this method any error in working the problem will also be checked.

One reading of the log during the series of sights will be sufficient as the boat will not move an appreciable distance in the seven or eight minutes between the time that the first and last sights are taken. As the sights are made they should be recorded in a notebook and set down in the same manner as the following three sights, taken during the last Bermuda race.

h (altitude)	*C* (chronometer)	*Log*
38° 00′	8h 16m 17s	
37 37	8 18 02	25
37 06	8 20 29	

We shall solve the first sight given above, and the ambitious reader can make a check by solving the second and third sights. A copy of the Nautical Almanac and of Bowditch are indispensable. The first operation is to correct the sextant reading of 38° 00′ for parallax, semidiameter, dip, and refraction. This is much simpler than it may appear, as you need only turn to Table 46 in Bowditch and take out the combined correction for all these corrections by entering the table with the angle, 38° 00′, and the height of eye of the observer, which on a small yacht is usually 8 or 9 feet. In this case the correction is 12 minutes, to be added to the observed angle, and in almost all ordinary cases for this height of eye it will be 12 minutes, so that the correction is virtually constant. Adding the correction, the angle becomes 38° 12′, and if the sextant has any error its correction will be added or subtracted to this reading. In this problem the sextant has no error.

With the altitude corrected, we next correct the chronometer. Few chronometers keep exact time; they either gain or lose time, but, as long as they gain or lose at a constant rate the exact time can readily be determined. Suppose the chronometer was losing one second per day and it had been set at exact time by a nautical instrument maker four days before this sight was taken. In four days it would obviously lose four seconds, and therefore to correct it we must add four seconds. The Greenwich civil time of the above sight would thus be 8h 16m 21s. However, this time must again be corrected to sun time or Greenwich apparent time. The sun does not take exactly 24 hours to make, apparently, one revolution around the earth, although civil time assumes that it does. Sometimes the sun is behind the

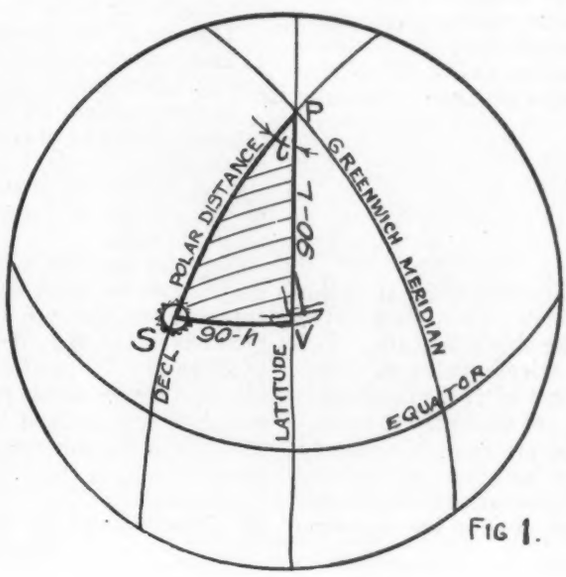


FIG 1.

civil time and sometimes ahead of it, there being at times a difference of as much as 16 minutes. The Nautical Almanac, however, tells exactly how much ahead or behind time the sun is for every hour of every day of the year. Turning to the table for June 28th, 1932, the day when these sights were taken, we find that at 8 p.m., or 20 hours Greenwich civil time, the correction is −3m 05s. This correction is known as the equation of time, and because it is given with a minus sign we must subtract it from the Greenwich civil time taken from the chronometer.

	h	m	s
G.C.T. (Greenwich civil time)	8	16	21
E.T. (Equation of time)		−3	05
G.A.T. (Greenwich apparent time)	8	13	16

The Greenwich apparent time — sun time — must be used instead of the civil time because the time sight gives us sun time — local apparent time at the ship — and, in figuring the longitude, we must keep the time on the sun time basis.

The third measurement recorded at the time the observations were made was the log reading of 25. This is necessary to determine the dead reckoning latitude at the time of the observation, because the ship's latitude is necessary in the solution of the time sight problem. At noon we determined the ship's latitude, 33° 00′ north latitude, by the simple meridian altitude method which was explained in the November, 1931, issue of YACHTING. We shall assume that the log reading at noon was 10, so that since noon the ship has run 25 minus 10, or 15 miles. This distance of 15 miles can be laid out on the chart in the direction in which the ship was sailing, and the latitude can be taken from the side of the chart for her position at the time of sight. We shall assume that the ship was headed due south, and, as one minute of latitude is always equal to one nautical mile, we can say that the ship is 15 minutes of latitude farther south than she was at noon. As the ship is going south we subtract the 15 minutes from the noon latitude, 33° 00′, and find that the dead reckoning latitude at the time of sight was 32° 45′.

The last value necessary for the solution of the time sight is known as the polar distance, "p," which is simply the sun's declination, taken out of the tables in the Nautical Almanac for the day and Greenwich civil time of the sight, subtracted from 90 degrees if the sun's declination is north, which it is in the summer, and added if the declination is south. In our problem the Nautical Almanac gives the sun's declination as 23° 16′ N. for June 28th at 20 hours Greenwich civil time. Therefore the polar distance equals:

90°	= 89°	60′
	−23	16
Polar distance	= 66	44

Now we have the three values necessary for the solution of a spherical triangle on the earth's surface — the sun's observed altitude, "h," the ship's latitude, "L," and the polar distance, "p." By trigonometry we determine the value of the angle "t" in Fig. 1, the hour angle which is the ship's sun time. It is not necessary to understand trigonometry to solve the problem. We merely accept the formula as we do the fact that the circumference of a circle equals $2\pi R$ and substitute the proper values in the formula, as has been done in the following example.

Add the observed altitude, h	38°	12′
Latitude, L	*32*	*45*
Polar distance, p	66	44
Divide sum by	2	137 41
Half sum		68 50
Subtract the altitude, h		38 12
Remainder, r		30 38

Now we turn to Table 44 in Bowditch and take out the logarithmic values for the following:

Secant of latitude, L	32°	45′	= 10.07518
Cosecant of polar distance, p	66	44	= 10.03685
Cosine of half sum, s	68	50	= 9.55761
Sine of remainder, r	30	38	= 9.70718
		Total	= 39.37682
The first number of this sum is disregarded, leaving:			9.37682

This number is known as the log haversine and with it we enter Table 45 in Bowditch, look it up, and take out the hours, minutes and seconds corresponding to this number on the tops and side of the table. The result is the ship's local apparent time — sun time. In our problem we find that this number gives 3h 53m 40s, that is, it was 3:53 p.m. plus 40 seconds ship's time when we took the sight. That is all there is to finding sun time.

From the article in the December issue we know that the difference between Greenwich apparent time and ship's time gives the longtitude.

Greenwich apparent time	8h	13m	16s
Ship's time	3	53	40
Difference =	4	19	36

Knowing that one hour equals 15 degrees, or by using a conversion table, 4h 19m 36s converted into degrees equals 64° 53′ west longitude. Pick out this longitude on the top or bottom of your chart and extend a line north until it intersects the dead reckoning latitude and you have the ship's position, which in this case will be about 20 miles north of Bermuda. It was the last sight taken prior to *Barlovento's* landfall in the last Bermuda race.

The morning sight is worked in exactly the same way, with the exception that the time found in Table 45 of Bowditch must first be subtracted from 12 hours to get the ship's sun time.

The use of the Bowditch tables may seem confusing at first, but the procedure is no more difficult than looking up telephone numbers and adding them together.

In this problem we have taken all angles to the nearest minute and have not bothered with splitting minutes of arc into seconds, because for all practical purposes the nearest minute is sufficiently accurate, as a difference of one minute of arc would, at the most, put you out only one mile.

Now let us take a look at the spherical triangle in Figure 1 to see what we have been doing. First we shall superimpose the sun on the earth directly below its position in the sky. We call this point "S." The ship's position is "V," and the third corner of the spherical triangle is the north pole "P." The sun's declination tells how far north of the equator the point "S" is located, and by subtracting the declination from 90 degrees we obtain the polar distance, which is the side of the triangle "S" to "P." The observed altitude minus 90 degrees gives us the side "SV," and the latitude

(Continued on page 82)

Looking out on the Black Sea from Queen Marie's palace, at Balcic

The Cruise of the "Marco Polo"

Part IV—Through the "Terrible Balkans" and to the Black Sea

By BEN AMES

BUDAPEST was rather like a grand party that had been planned months ahead — it fizzled. So fine had it loomed in anticipation, that it is small wonder that on my arrival, at night, it seemed one of the most unattractive places on earth.

But the next day my appreciation of Budapest increased tremendously. More than most European cities, Budapest turns its best front and its gayest side to the river. I moored in the heart of things. In the evenings, surrounded by brilliantly lighted bridges, palaces, and the sophisticated Corso with its line of cafés, it all seemed like a stage setting, unreal and pleasant. I stayed in Budapest longer than I had intended.

Taking on stores was not difficult. At the nearby river front market I bought enough fruit and vegetables to last a week for the equivalent of about eighteen cents. Then, against all advice and counsel, I left for the "out there in the Balkans." "You'll be shot at by the soldiers on the banks, you can't get food, you'll be eaten up by the mosquitoes, you can't buy gasoline, the river is very difficult — it's the jumping-off place, a terrible country." Anyway, we would go and find out.

+ + +

"What, you are all alone!" exclaimed the agent at the steamer landing where I had stopped. "I'll give you my son, Ivan, to go with you to the border. You must come to dinner and have some wine from the Archbishop's cellar with me." As I had not been ashore since I left Budapest two days before, the good agent's ideas struck me as very sensible. We dined in the open under the stars and the dusty little station was a pleasant place with the moon shining on the river.

Ivan proved to be a great helmsman and knew the river well; we didn't run aground once. For miles the low banks of the river are deserted except for occasional fishermen. The towns are built back from the river on higher ground where there is no danger from floods.

The town drummer proclaims a reward for my stolen possessions

In a lonely, deserted stretch of the river we came to a big white cement house, low and rambling. All by itself on the edge of the great Hungarian plain, it was a kind of farm-fishermen's inn. The proprietor, a large bald-headed man, had once worked for Ivan's father. We drank wine and soda with him in one of the big square rooms, while a servant girl puffed and tugged, getting on his socks. I was the first American he had ever seen, although he had an aunt living in "O-hi-O," he called it.

The public room of the inn was twenty feet square, with a small bar at one end and three tables, one of which was occupied by the sad, serious gypsy orchestra. The leader looked remarkably like Charlie Chaplin in his most doleful moments, but the music was excellent and never gave out. Later, a large party came in and the inn took on a New

Year's Eve aspect. The men wore celluloid collars which would not melt when they danced the strenuous national dance of Hungary—the Csárdás. An exciting dance, it is a cross between a Viennese waltz, the Charleston, and an endurance contest. You may also sing and shout while doing it.

Outside the moon shone white on the heavy silvery mist that clung low over the Danube. The violins and singing from the inn died away as we returned to the beach. In the woods a man set up a low wail—"to keep the deer in this part of the woods," the hunter explained. . . . It was the kind of evening that tourists in Budapest were inquiring for—and will never find.

"Here are the Balkans—you'd better lock up," Ivan cautioned me as we tied up at Mohacs, the Hungarian frontier, to go through the customs. Ivan had a very poor opinion of the Balkans. The day before I had heard him talking with a German. "Hungary is *not* one of the Balkans," he said disgustedly, "it is one of the civilized states."

(Top) A low and swampy fishing village in the delta. Most of the traffic is on canals. (Bottom) "Marco Polo," moored at the foot of the famous fortress of Golubac, in Serbia

While I was cooking dinner *Marco Polo* drifted across the Jugo Slav frontier and anchored for the night a short way above the custom's station at Bezdan, to get a good night's rest and be ready for the inevitable fray the next day. I was prepared to face the worst as I ran the bow against the shore of the small boat harbor at Bezdan early the next morning. In Budapest I had been informed that the Jugo Slavs were most unreasonable, that Hungarian clubs could make no arrangements with them about customs, and that I would probably have to have an armed guard with me all the time I was in the country.

A soldier took me to the police headquarters where my passport was stamped; then the harbormaster and other officials came down and admired the boat—particularly the water closet. The lead customs seal was affixed to the rigging. "You have a camera—bring it to the bureau." Now, I thought, I'll hear the worst. Everyone was much too good-natured—there must be a catch somewhere. At the bureau the number of the camera was entered in one book and a few lines about the boat in another; the business was concluded. There was nothing to pay, no armed guard to take along, and it had all taken but 45 minutes. "Watch out for the sandbars, the river is two meters below normal," the harbormaster said as I wrung his hand in parting. I sailed in a daze, hurriedly, fearing that at any moment they would realize that it was a mistake to let a boat into their country with so little fuss.

The river was broad now, with beautifully wooded shores, the banks lined with long-legged cranes. We passed many barges being towed by men upstream against the three-knot current. Half a dozen men in harness on shore strained at the tow ropes of the 60-foot barges, loaded with wood, hay and produce of all kinds. Going downstream, they climb aboard and man the sweeps.

We sailed from Novi Sad in the first rain we had encountered for months. This added to the difficulty of distinguishing the channels. There are no kilometer markers on the banks in Jugo Slavia and I could never figure out where I was. But there are white posts on which lanterns are hung at night to guide the ships. These are a big help; when you spot one, you head for it until you see the next one. A map of the Danube between Budapest and Belgrade is useless; it looks as though the river had been dropped from a great height and had splashed all over the neighboring countryside.

Dodging in and out among the sandbanks, I followed a small steamer around an island and there, high on a hill ahead, was Belgrade, lying between the Danube and the Sava Rivers. The Sava is navigable for 500 miles, clear up into Croatia. Belgrade is so busy building that it gives the appearance of being continually torn up and unfinished. In fact, the city has doubled in population in the last ten years and hasn't yet caught up on its building program. Unlike other European cities, the very worst front of Belgrade is the waterfront. There are no docks or quays, and the tremendous volume of shipping is dragged through the mud up over the river bank.

Below Belgrade large towns are few, so I took on enough Mobiloil to take *Marco Polo* to the Black Sea, and gasoline for 400 miles. I called at the offices of the Vacuum and Standard Oil Companies and found them, as always, courteous and interested in seeing that I got what I wanted and in the way I wanted it. These international organizations make a trip such as mine very much easier.

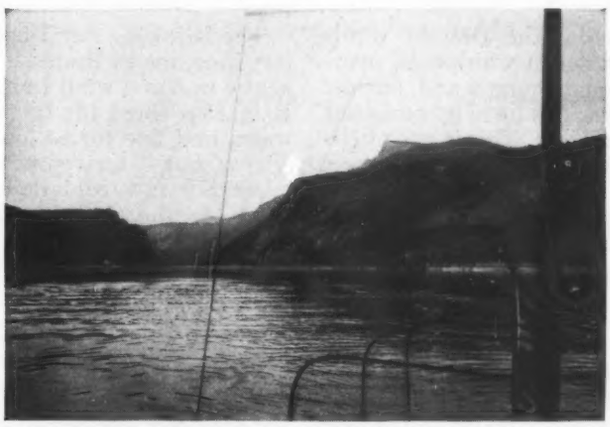
I left Belgrade on Sunday, but the port was busily engaged unloading barges lying two and three deep along the shore—a regular boom town aspect. Down the river Europe's newest metropolis extends for miles.

There are many and splendid ruins on the Danube, but they are not so well advertised as those on the Rhine. Feeling rather badly about passing so many by, I landed on the beach in front of the old Turkish fort of Ramá. But it seems that if you want to see what is on the other side of those old crumbling walls you must first get permission from another town. The group of sages sitting on the piazza of the government building drinking slivowitz demanded my papers, but couldn't read them. "Latinish," the official in the big sheepskin-lined vest said, referring to the print, and handed them back. Drinking slivowitz on a sweltering hot day in a great sheepskin vest — I wonder how that man keeps warm when winter comes.

We passed the Rumanian border and for one hundred miles the river flowed between Jugo Slavia and Rumania. The Rumanian shore became more hilly and in the distance the blue Carpathian Mountains drew closer as we neared the wildest and finest part of the Danube.

As the river narrowed to enter a gorge ahead, and just beyond a series of gaunt, needle-like rocks that stuck up in the middle of the stream, I ran *Marco Polo's* bow onto the beach and landed on the Serbian side, at the foot of the famous Brankovic fortress of Golubac.

Opposite, just above the jagged rocks on the Rumanian side, was a picturesque little village, white houses and church set back a little way from the shore, in the trees. It seemed, at the time, a good place to spend my first night in Rumania. It was dusk when I tied up to the steep bank off the little village. A man hailed me in German. He had an important letter he had received from America four months ago, and would I read it for him? He would be pleased if I would spend the evening at his house. The border patrol came up and through my new acquaintance it was agreed that I could spend the night there in safety.



My companion led me through the deserted street to the house of his father, the village priest, a fine looking, kindly old gentleman. Five years ago an American had been there and now they had a letter from him. It was a piece of good luck that another American had happened along to read it for them. I spent a very pleasant and jovial evening with Father Bafanu and was escorted back to the boat laden with gifts, including a stone cannon ball — one that had been fired at the fort across the river in Roman times.

(Top) The Karzan Pass, where the Danube flows through a narrow crevice in the mountains. Though narrowed to a small stream, the river is calm, as the depth here is some 200 feet. (Bottom) Ada Kaleh, an island in the lower Danube which was held by the Turks until 1913

It was a pitch black night and a high wind was blowing when we reached the boat. The canvas top over the cockpit was gone! Robbers? "Impossible!" Father Bafanu said. We hurried on board. Below, everything was in wild disorder; the skylight had been broken open, books and papers were scattered from one end of the cabin to the other, and the galley lockers were upside down. The robbers had been looking for money; strangely enough, they had overlooked the obvious place, reasoning that money would be at the bottom of a flour bin. I had carelessly left all my money and passport in plain sight on top of the buffet! But they did steal all my clothes, blankets, hammocks, tins of gasoline and, for some unexplainable reason, all the negatives and prints of the pictures I had taken during the entire summer.

I called the border patrol. When I heard a shot fired I thought the hunt was over, but it was only the guard calling for more guards — who didn't come. The mayor came down, his baggy, lace-trimmed trousers blowing in the wind, took off his shoes and came aboard to inspect the scene of the robbery.

There was nothing more to do that night but to lie down in my clothes and try to sleep. The robbers, disappointed at not having found the vast sum of money they were sure would be on an American yacht, could be expected to return, I thought. My only weapon, Father Bafanu's cannon ball, I kept at my side.

The village, Coronini, has changed little since the time when the fortress was a modern stronghold. It has no railroad, automobile or steamship connection; no telephone, telegraph nor post. There is no way, even, of finding out the time if your watch has stopped. I set mine by the corporal's, which he assured me was correct, although one hand was missing.

For three days I waited for the police to come from the neighboring town. We sent messengers, but the policeman was away and couldn't be found. When he finally came he suspected the soldiers of being party to the robbery, but because they were soldiers he could do nothing but send to another town for their commandant. Father Bafanu was quite upset. He regarded the incident as a

blot on the escutcheon of Rumania. Everyone had ideas on the subject. The barber thought it was a subtle plot of the Hungarians to place Rumania in a bad light. The soldiers said I was probably a spy — traveling so mysteriously in a boat.

When the policeman asked the mayor why he had done nothing he said that he was afraid. So did the innkeeper, who would tell nothing. The whole town was afraid to say anything, everyone but her father, Fraulein Bafanu said. Since the war these people have a bad habit of throwing dynamite into the houses of those who have displeased them. Bombs are a favorite weapon in the Balkans. When your train crosses a frontier you are politely asked to get up while the guard looks under the seat for bombs.

When it began to look as though the police would never find the robbers, I offered a reward. The mayor ordered out the town crier, or, rather, drummer, who beat his drum up and down the village proclaiming a reward for the return of the stolen goods — and no questions asked. This is a common way of making all announcements in the Balkans, where so many people cannot read that posting placards would be useless.

The commandant arrived on the scene and it looked as though something might happen. He thought it best for me not to be out alone at night and posted a guard at the boat. The next day, however, he drove off without a word and I gave up the idea of recovering my possessions.

*For sixty miles below Coronini the Danube winds through the mountains. In a series of whirlpools, over-*falls, and rapids, it flows through gorges and narrow channels cut from the rocky river bed until it comes out below, through the famous Iron Gate. This is one of the places where one is supposed to have a pilot, so I was not sorry to be sandwiched in between two tows going downstream when I left Coronini. One of them soon got ahead and the other was too slow, so I was left to my own devices. The intricate channels zigzagging sharply across the river are well buoyed; it is only necessary to follow the numbers, taking good care to skip none.

The current surged and boiled as we bobbed about or were swung abruptly to one side or the other. Out of the corner of my eye I could see white water and breakers where, just outside the channel, the river flowed over a ledge or shallow rocks. A boat would not last long there. I was glad I had put in a new tiller rope, as the wheel strained when the rudder kicked.

Ahead, the way seemed clear. Then, suddenly, the river apparently ended as it ran into a fjord — into the mountains themselves. But there was a narrow crevice left for the Danube — the Karzan Pass. As the river narrowed to a small stream, I expected a turbulent maelstrom. But it was calm, the water still as glass. The depth of the water here is 200 feet and the current runs deep down under the surface.

An automobile road follows the pass on the Rumanian side, but on the Serbian side you can see the laboriously carved ledge and the square holes cut in the rock to hold the supports of the old Roman road.

When I arrived at Orsova the chief of police gave me some good advice. "Don't ever tie up near the soldiers where there are no police. They always do as they please where they are not watched."

"How about stopping at the island below here, at Ada Kaleh?"

"Oh they're all right — they're *Turks*."

"Of course," I assured a fellow yachtsman at Orsova, "I have a good pilot for the Iron Gate." This way of evading the issue seemed easier than arguing with him and, besides, he probably knew any number of good pilots. So I left Orsova alone.

More than Bingen Straits in the Rhine, the Ludwig's Canal, or the stone bridge at Regensburg, I had looked forward to the Iron Gate as an event. Now as I drew near, I realized that I was approaching a climax. The disconcerting part of it was that I didn't know just where the Iron Gate was. My map devoted but three inches to the whole 60-mile stretch of rapids and failed to indicate the Iron Gate at all. However, I knew there was a canal on the south side, so when I saw a series of red buoys ahead and a stone breakwater that might have been a harbor entrance, I put the helm over and shot in. As I did so I could see down the river on the outside of the canal a long line of falls and jagged rocks tearing the water into a white smother. In the cut, a kilometer and a half in extent, the water tore along at the rate of about 16 kilometers an hour. We were tossed about in much the way we would have been if the gates of a big lock had been suddenly opened and we were shooting out with the current. Once we had recognized the entrance and entered the canal there was no danger and very little excitement. No other traffic was in sight and I barely had time to wave to the crew of the railway locomotive that pulls through ships bound upstream before we were out in the broad river below. It is only in the canal that the current is too strong for the regular tugs.

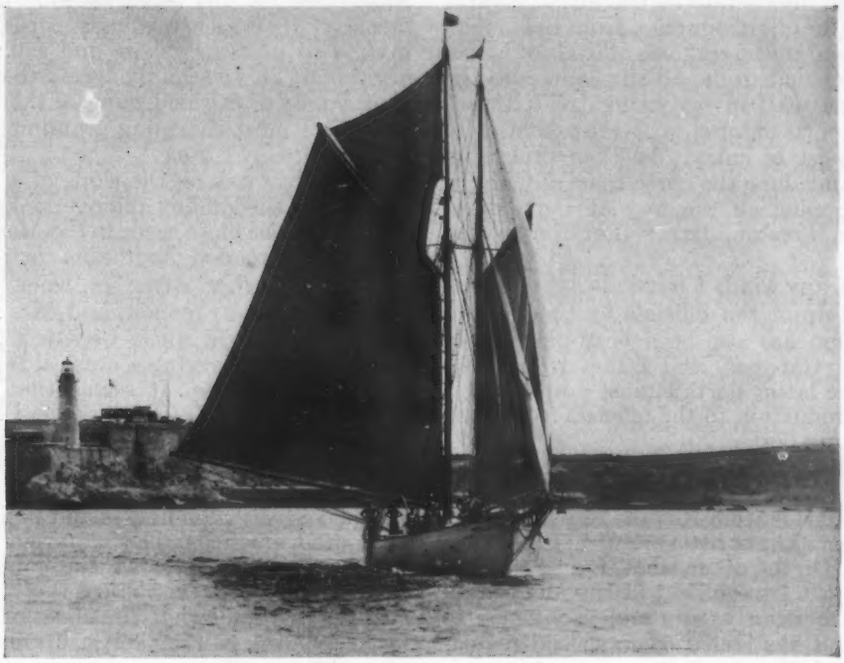
The following day I had lunch in Jugo Slavia for the last time, tea in Rumania, and dinner in Bulgaria. In a heavy rain and wind I anchored a short distance off the Bulgarian shore for the night. The weather had been warm and fine for so long that I had forgotten about winter, but it arrived without warning. There followed miserably raw cold days of plugging into a choppy green sea, the wind throwing cold spray over the bow — the river wide now and whitecapped. When the wind went down, a heavy, still blanket of fog settled over the river, making navigation impossible. "You can expect this from now on," a tug boat captain at Vidin said, as I waited impatiently to be off. "Many of the boats have stopped running."

When the opposite shore was barely visible, I sailed, the slender white minarets of Vidin quickly fading away astern in the mist. In the gray dreary day, islands appeared, like mirages, out of the broad glassy river. In the light mist that enveloped everything, I seemed strangely alone, as though *Marco Polo* and I were the only things left in the world — more isolated than one feels at sea. And then, out of the gray light around an island, a Dutch motor barge would appear, or a dim white passenger ship from Vienna, soon to vanish astern, and I would be alone again in the still, hazy river.

All day I ran without stopping, trying to make Nikopoli by nightfall. But it was only by the help of the moon that I followed the high lonely cliffs on the Bulgarian shore and came to an anchorage off the army's pontoon bridges. I soon had more than my quota of attendant soldiers gathered about. "Dobra, dobra" (good, good) they say, vigorously shaking their heads. When they mean "no," they nod, but to say "yes" in Bulgaria you must shake your head. It was a bit confusing at first, but no more so than most of their ideas as to where I was to anchor.

Later, when I was drinking thick black Turkish coffee in the town, a squad of soldiers came for me. Back we marched to the guardhouse, where I think we tele-

(*Continued on page 78*)



Jose Luis Lopez, Havana

Cruising in Cuba can be accomplished with freedom from difficulties with port regulations if some knowledge of the procedure is known beforehand. Particularly in Havana, yachtsmen will be accorded every courtesy

Cuban Yacht Regulations

Advice for Yachtsmen Entering Cuban and other West Indian Ports

By HENRY HOWARD

A GOOD deal of criticism has been heard regarding unreasonable port regulations in various harbors of Cuba. In 1930, after one or two disagreeable experiences, I thought it might be possible to make a treaty with Cuba which would provide that American yachts in Cuban ports be accorded the same treatment that Cuban or other foreign yachts receive in American ports. I was under the impression that our laws and port regulations were at least as reasonable toward foreign yachts as those of Great Britain and her possessions. I discussed this with Mr. Taylor, Assistant Director of the U. S. Bureau of Foreign and Domestic Commerce, and as a first step he kindly gathered the actual facts regarding laws and regulations pertaining to the treatment of foreign yachts in American ports.

To my surprise it developed that pilotage regulations are under state jurisdiction and that pilotage for foreign yachts is compulsory in the majority of our American states bordering on the seacoast. We are therefore not in a position to criticize too severely the regulations of Cuban ports. We can only point out to the Cuban government that if it wishes to encourage American yachts to visit Cuban ports the present regulations and the present attitude of many port officials must be radically modified. Nothing could be finer than the treatment accorded by higher officials, but unfortunately they are not always easy of access.

Before criticizing Cuban officials and regulations, American yachtsmen would do well to realize that of eighteen seacoast states only six exempt foreign yachts from compulsory pilotage, while the laws of twelve require it in some form or other. This surely is not a situation to which American yachtsmen can point with pride, especially those of us who have had experience with the liberal laws and regulations of Great Britain and her dependencies. Moreover, this situation has a direct bearing on the treatment of American yachts in foreign ports.

Let us turn now to the situation in Cuba. A few years ago a friend of mine went into the port of Gibara, on the north coast of Cuba, and was boarded by the customs officials, who appeared much irritated. No one on board could speak a word of Spanish and none of the officials spoke English. Finally, the officers went ashore, but in some way managed to convey the impression that they would return with the police. Horrified at the thought of a filthy prison cell, the visitor immediately put to sea in the face of a gale and driving rain storm,—of course, not daring to touch at any other Cuban port. This necessitated a long hard run before reaching a neutral anchorage. As a result, my friend, a New York banker, has no use for Cuba or the Cubans. On the other hand, think of the treatment that might be accorded a Cuban yachtsman by American officials in Machias, or Rockland, Maine, especially if the Cuban did not understand a word of English and perhaps had unknowingly committed some act that seemed to the American officials a criminal violation of our laws.

The next year, with my friend's experience in mind, I secured a circular letter of introduction from the Cuban Ambassador, addressed to the customs officials of Cuba, requesting them to extend to me all the courtesies the law allowed. This resulted in my being treated with great kindness at all ports entered, with the exception of Santiago, our first port of entry. We then proceeded around Cape Maisi and along the north coast of Cuba as far as Nuevitas, stopping on the way at Port Mata, Baracoa, Port Taco, Preston, Banes, Port Sama and Port Padre.

Without letters of any kind, I have always received courteous treatment from the officials at the port of Havana. My reception has also been very pleasant in the ports of Mariel, Cabanas, and Bahia Honda, although in these three latter ports I must admit that I carried letters of introduction to the officials from their friends in the adjoining ports.

Perhaps the situation is best explained by keeping in mind the fact that the number of American yachts visiting Cuban ports, aside from Havana, is exceedingly small, so that the officials have little practical experience with the regulations. On the other hand, I am sure I am right in stating that the government in Havana is anxious to encourage American yachts and yachtsmen to visit Cuban ports and has issued some special regulations covering the subject.

Prior to 1930 I had never been required to pay pilotage either for entering or leaving a port, nor had any dues been charged for moving from one anchorage to another within a port. In January, 1931, however, pilotage which was not offered or received was charged for at Cardenas, and I have been informed by a friend that in other Cuban ports he was forced to pay pilotage covering entering, leaving and changing anchorage, a separate charge being made for each movement of the yacht. The pilot's fee in Havana for yachts under 300 tons is $10, and the same amount will be charged for each movement in the interior of the harbor.

The days on which overtime is charged by port officials in Cuba are: January 1st, February 24th, May 20th, October 10th, October 12th, December 7th, December 25th, and all Sundays. *Visiting yachtsmen anchoring in a Cuban port "after hours" may refuse to allow port authorities to come on board until the following morning in order to avoid the payment of overtime.*

Mr. Isais Cartaya, Chief of the Customs Section of the Treasury Department, at Havana, assured Mr. Nufer, the Acting U. S. Commercial Attaché, that if visiting yachtsmen, members of *bona fide* yacht clubs, were to get in touch with him personally by long distance telephone whenever any minor difficulties arose not only would he be glad to give immediate assistance, but, if necessary, would reprimand subordinates who might misinterpret administrative regulations or laws. If you have the friendship and good will of the officials many of the laws and regulations will be interpreted in a most liberal manner. A little courtesy and formality will in most cases accomplish a great deal. It is my custom to learn the names of the officials carefully and then to introduce them formally to my guests down below in the cabin and to offer cigars and refreshments all around before talking any business.

One of the pleasantest contacts I made in Cuba was the result of such action in Port Mata, on the northeast coast of Cuba. The port official, Mr. Delgado, after the first greetings were over, was much interested in a "Dulcetone," or small piano, which I have in the cabin of the *Alice* and I therefore asked my son and daughter to give him a demonstration, with the mandolin accompanied on this small piano. This pleased him immensely. He was exceedingly cordial and friendly and invited us to come ashore and call at his house in the afternoon. This we gladly agreed to do, and met a promising family of thirteen, some of them pretty well grown up, and a most charming grandmother who had afternoon tea ready for us.

The house was on the slope of a hill some little distance from the landing and overlooking a most beautiful picture. It was like a scene in the Marquesa Islands, with the heavily wooded mountains encircling a considerable part of the harbor. After tea, when we started to leave, we were urged to remain, and Mr. Delgado pointed to the adjoining field where we saw a procession of about ten men, each carrying a musical instrument, tramping towards the house. It seems that, in return for the music on *Alice*, Mr. Delgado had mobilized the local orchestra, which really played beautifully, specializing in the dances and folk songs of Cuba. Included in the orchestra was an African drum with a single head which was played with the fingers and palms of the drummer, without drumsticks. The performer was an artist and would have brought down the house in any theater in New York. He could change the pitch of the drum so that it gave somewhat the effect of a double bass viol, better than a pair of kettle drums. This was accomplished by muffling part of the head with the left hand.

Aside from its financial aspect, a letter of credit is often a useful document to have in Cuba, especially if it is written by an old bank that has connections there. I was fortunate in having a letter from the old firm of Kidder, Peabody & Co., and their correspondents in Santiago, Brooks & Co., went out of their way to help us, because of old associations with the firm. The senior partner was a member of the yacht club at Santiago, where he put us up and personally introduced us to the officials and many of the members. He also gave us good advice as to the proper people to employ for different kinds of service which might be required, such as customs agent, laundry, ship chandlery, etc. And this brings up another important matter.

Usually, there will arrive aboard the boat, with the customs officials, a ship chandler, or ship agent, who will offer to take all the responsibility of entering and clearing off your shoulders, to furnish you a launch, taxicab and, in fact, to safeguard your interests and to save you from the Cuban laws by his great influence with the officials. Beware of such individuals and make no engagements with anybody who comes on board. Tell them you will see them on shore and decide then what you want to do. Such an individual came aboard the *Alice* at Santiago, but I had had experience enough in the past to avoid any entanglement. Later, a friend on shore warned me particularly against this person. I have before me a bill made out by this same gentleman dated Feb. 27th, 1931, against the *Lord Jim* for items aggregating $151. Following are the items in detail:

Clearing and entering of yacht agent fees	$ 50.00
Port doctor fees on public holiday	10.00
Custom fees on public holiday	15.00
Custom clerk at baggage department	10.00
Pilot fees entering and outgoing	21.00
Navigation Department clerk for *un*rolling cabin boy public holiday	10.00
Immigration department service on public holiday	15.00
Motor car hire to master on arrival and on clearing also motor boat hire to master	20.00
	$151.00

The first item is an unnecessary one. There is nothing involved to which, with a little trouble, you cannot attend yourself. If, however, you do not wish to do so, you can obtain the services of an experienced clerk on shore, for, at the utmost, $15, instead of the $50 charged by the agent in question. The last item, $20 for motor car and motor boat for the master on arrival and on clearing is, of course, unnecessary. The yacht's boat is good enough, and the distance to shore is a short one. Moreover, if the expenses had been incurred in the ordinary way, without the agent's assistance, this item of taxi and motor boat would probably have cost not over three dollars at most. The other items, covering extras for holidays, could have been avoided by entering on a working day instead of on a holiday or Sunday. If you cannot wait over a holiday, you must then pay the price, but, if the entry had been made within the proper hours, on an ordinary week day, and the steamship agent had not been employed, the total cost would have been less than $25 instead of $151.

Another important detail is to pay one's respects to the American consul immediately upon arrival. Do not wait until you need his assistance. It is more satisfactory to establish friendly relations before the need arises.

To me, one of the pleasantest aspects of cruising, and, in fact, of all travel, is in making contacts and personal friends in the communities visited. This is quite easy if you remember that the general continental custom, which applies very largely in Cuba and the West Indies, is that the visitor must make the first call. The proper etiquette, therefore, is to leave cards immediately at the residence of the principal officials and the people whom you would like to meet. In British Colonies a book is provided at the Government House in which you are expected to enter your name and that of your guests immediately upon arrival. It is, in fact considered rude and a breach of etiquette not to do this. If the Governor wishes to extend courtesy, you and your guests will receive invitations to various functions, such as garden parties, tennis parties, etc. In Cuba it would be quite in order, and would be considered an act of courtesy, to leave cards for the Mayor and for your banker, if you have a letter of credit. On the other hand, if you wish to be left severely alone and are not interested in meeting the people of the community, all that is necessary is to do nothing, since it would not be proper to call on you in the absence of any move on your part.

Predicting Her Speed

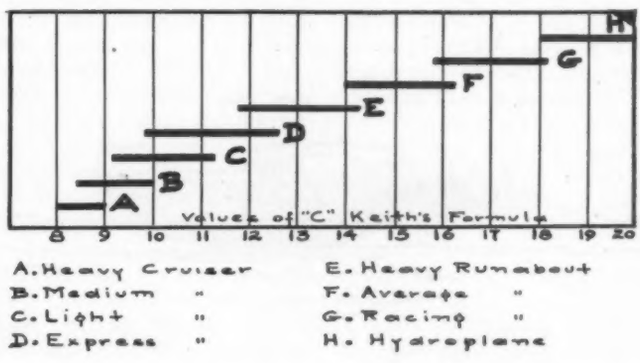
By

GERALD TAYLOR WHITE

"WRITE," said the Editor, "a nice, instructive article on how to foretell the speed of a power boat. But don't make it too technical," he added.

The first part of the order is fine, but why did he have to add that technical restriction? It sort of cramps one's style. Every naval architect will agree that requests for speed estimates form a great part of his voluntary contribution to science. Meet a man even casually, tell him your profession, and he will immediately begin, something like this: "I've got a boat about so long, and kind of beamy. How fast will she go with a 4-cylinder engine?" If you tell him truthfully that you don't know, he'll accuse you of lying or of ignorance. If you ask him some little simple thing like the prismatic coefficient, or whether the waterline is of approximately trochoid form, he will look wildly at you and telephone the insane asylum.

For some reason yacht designers are supposed to be gifted with a mysterious power by which they can wave a wand and read the speed of a boat from a paper held in the mouth of the rabbit. Ask a naval architect something simple like the length of the "GZ" arm at an angle of heel of 43 degrees and he'll kick a slide rule four times in its celluloid tummy and give you the proper answer. But ask him to figure the probable speed of a boat, given a dozen helpful items, and he will sit down for the job and stay "sot" for some little time.



In the first place, there is no such thing as a universal speed formula which will enable anyone to figure speeds for themselves. Every formula I have ever seen — and I believe I have a speaking acquaintance with most of them — involves one or more factors which are variable and which must be estimated by the designer on the basis of past performance.

One of the best known of all formulae is Keith's. It is very simple and involves no mathematics higher than cube root. But it does contain a factor which varies over 2.5 times, depending upon the type of boat. This little joker in the deck is known as a "variable." Use the variable at one end of the line, and your boat will make, say, ten miles an hour. Use the other extreme, and she will travel at 25 miles. Obviously, you can guess closer than that, even without a formula.

The next formula, not quite so simple mathematically, has a variable factor ranging from 1.2 to 1.6. That's better, but even then the boat you expected to do 16 miles might do only 12 if you have used the wrong estimate.

Trying to get a little closer yet, we find the Taylor formula, used extensively by designers who do not mind a little hard mathematical work. Here you have a variable of an amount that would equal only a mile an hour. That's close enough, you may well argue. But Mr. Taylor's method involves such cunning little points as fractional roots, block coefficients, area of wetted

surface and a factor of three-hundred-seven ten-millionths as a multiplier.

The Editor requested me to be non-technical and here I've got you into a mess where, to explain the Taylor formula, I'd have to tell you how to calculate displacement in pounds and in tons, how to figure wetted surface, block coefficients, and resistance in pounds per ton. Then, if you were still with me, I'd have to confess that the answer would not be your kind of horsepower, but a thing called "Effective Horsepower," which you would then have to change to "Indicated Horsepower" and then to "Brake Horsepower." Having eventually arrived at the B. Hp., you would still have to estimate how nearly your engine actually develops the B. Hp. shown on the maker's dynamometer.

Something tells me that we'd better drop Mr. Taylor's contribution to science or else the Editor will turn this down. For his sake we'll go back to Keith and his formula. Here it is:

$$M = C \times \frac{\sqrt[3]{L \times P}}{B}$$

"M" being the miles per hour, statute; "C," the nice little variable shifting from about 8 to 20; "L," the waterline length of the boat; "P," the brake horsepower; and "B," the waterline breadth of the boat.

You multiply the length by the power and take the cube root of the result. Divide the root by the beam of the boat and multiply by some number between 7 and 20. Everything is easy except choosing the proper value for "C."

To help you choose "C" properly, let me give a few examples: A heavy cruiser had a "C" value of 8.2. A well-designed standardized cruiser had a value of 9, but another similar boat of a little larger size had "C" as 10. A value of 12 was found for a fine express cruiser, and that seems to be the range as far as cabin boats are concerned.

In the runabout field an average sort of boat had a "C" value of 14, while a specially-designed racing job went up to 18 as the "C" value. That seems to be the upper mark until you reach boats having steps. The lowest value I have found for hydroplanes is 18, and the highest, 20. It is rather remarkable that boats like *Miss America* do not rate a higher "C" value than the smallest of the inboard-powered hydroplanes. Broadly speaking, some of the little 151-class hydroplanes were quite as efficient as the world's champion.

With this list of typical "C" values, and the appended graph, you should be able to select a figure that will apply to your boat, but you must keep in mind that the factors used in my table have been reduced to true figures. This means that you must underestimate powers and also the ability of your boat. When I say, "a well-designed standardized cruiser," I mean a boat that has been developed by practical experimentation over a period of some years, under the direct supervision of a competent naval architect. If such a boat has a "C" value of 9, the average cruiser built without a complete set of plans and calculations would probably be lucky to rate 7.

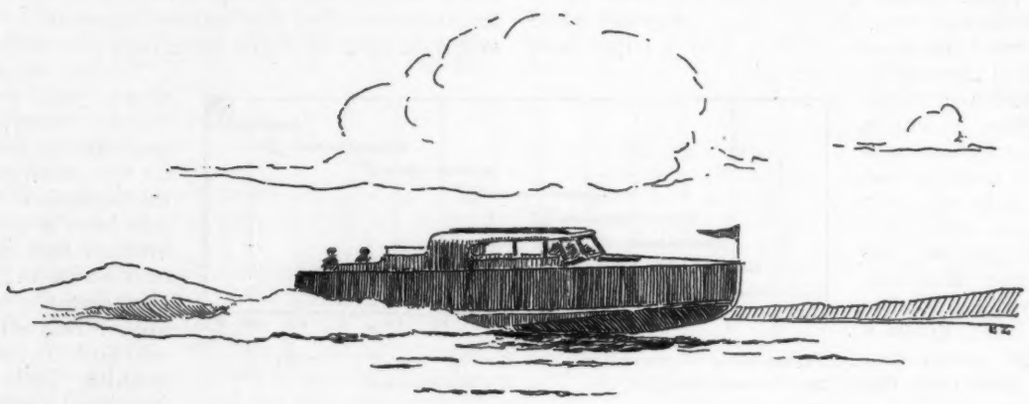
Now, to check the correctness of your estimate of the "C" value, use the other simple formula I mentioned. It is:

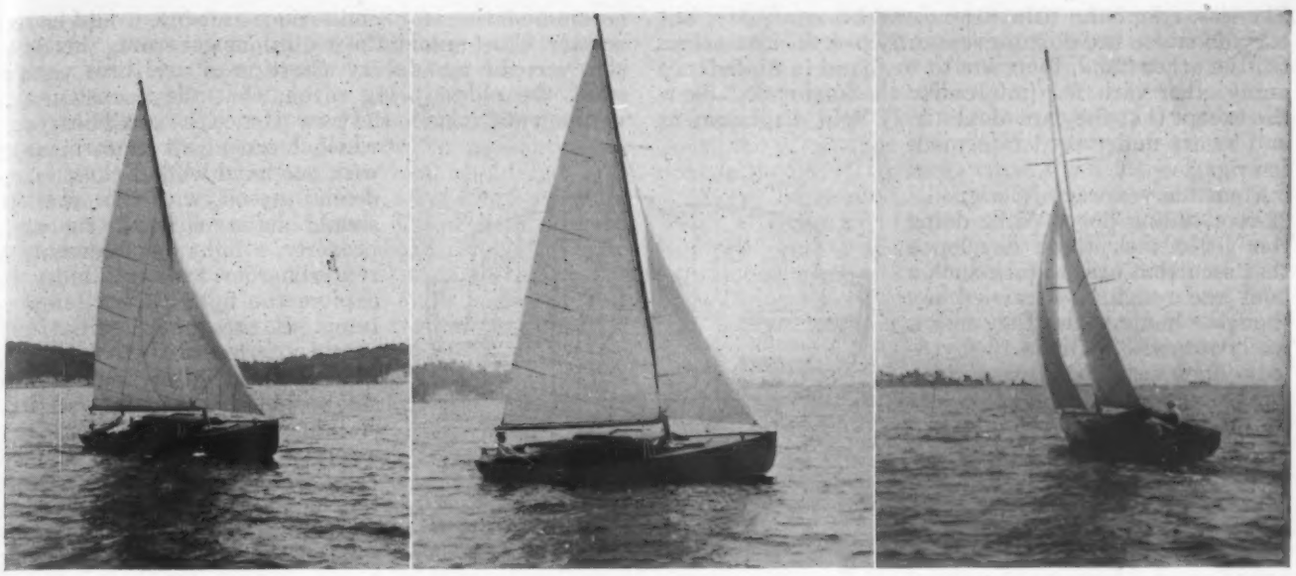
$$M = C \times \sqrt{L} \times \sqrt[3]{\frac{P \times 1000}{D}}$$

The symbols "M," "L" and "P" stand for the same things as they did in the Keith formula, but "D" is the displacement in pounds, and "C" varies from 1.2 to 1.6. The lower figure applies to heavy cruising boats and ranges upwards to runabouts. I have never tried this formula for racing boats for the reason that any formula involving displacement goes "haywire" when the boat starts to plane.

The trick in using this formula is to be conservative in picking your "C" value. The other stumbling block may be the displacement. If you haven't that figure there are but two things you can do. One is actually to weigh the boat in cruising trim, including the crew, fuel, etc., and the other is to have a naval architect calculate the displacement from the lines drawing from which she was built. If she was not built from properly prepared plans, you will be quite justified in going back to the up-creek builder who told you, "I can turn out a better boat by eye than all of them book-taught designer fellers," and rending him limb from limb. Having attended to him, hire a naval architect to take the lines off your hull and prepare a set of drawings. His fee will not be quite as much as if he had designed her properly in the first place.

If none of these alternatives sounds feasible, give up the idea of this formula and concentrate your speed figuring on the Keith idea. Beyond that, there is but one suggestion, just made by a friend who is looking over my shoulder. He says, cynically, "Tell 'em to ask the salesman how fast the boat is supposed to go and then divide by two." Which is not a good way at all of doing the job. But it does make a good ending — or does it?





"Nixie" is a smart sailer and is extremely easy to look at

"Nixie," a 22-Foot Cruiser

Not a Tabloid, but a Fast Day Sailer and Cruiser

By PHILIP L. RHODES

DURING the past year or so there has been a decided boost in the always keen interest in small boats. I presume that this is a logical product of the economic situation and, of course, this factor must be given full recognition. But casting logic aside, I prefer to think of this movement as born of a rejuvenated and wholesome respect for the small boat itself. Perhaps yachting is undergoing a debunking process. Perhaps some of those who declared they could never consider constructing a boat of less than 40 feet waterline, full headroom and all the appurtenances, are supplanting fond hopes and doubtful assurances with sound judgment and the comforting persuasions of the inverse application of the law of diminishing returns; the smaller the boat the greater the fun.

The designing of any boat is an absorbing and fascinating engineering adventure, but in the design of a small boat it seems that there is a double charge of fascination. In that, I think I can testify for the entire profession. The small boat has but a single uninteresting aspect that prevents its being a more popular figure in the designing office — it hardly measures up to commercial importance. In a liberal sense, the size of a boat is largely a matter of scale as far as the design is concerned. Large or small, they require the same principal drawings, the same care, the same technical treatment, the same calculations, and in most cases, greater skill. Because a boat is small the design is sometimes slighted, but every boat, regardless of size, deserves a careful, thorough design.

The term "small boat" covers a large field comprising a wide range in type, a greater variety — much greater — than is offered in the larger classes. Most anything goes, and usually with success, in the smaller boats. There are boats of radically different character racing on fairly even terms in the Suicide or Development Class, though I predict that as this class progresses one particular type will become outstanding. But while racing, the product of which is always speed, may tend to standardize the various classes, the small cruiser and day sailer are governed only by local conditions, the intended service, and the owner's requirements, and these considerations cannot be coaxed into a rule. We shall forever continue to see small cruisers of all shapes and proportions and all will be dealing out their fair share of enjoyment.

Because of the foregoing, it is difficult, and not always politic, to criticize another's preference. Some want smart boats, better adapted to all 'round day sailing, with but meager accommodations for an occasional week-end cruise. While these owners do not mind "roughing it" somewhat, there are others who demand all the accommodations and comfort that can be squeezed into the length overall. They care most for speed, they say, though that statement is not literally true, and in most cases they seldom get it. This type represents the extreme of those boats best designated as "tabloids," little fellows of rather heavy displacement that try awfully hard to look like big boats. They are more commodious, more expensive and, properly designed, more seaworthy. Sometimes we see an extreme tabloid which, the owner maintains, "can stay out and take it." The customary retort is to the effect that "she can't help herself, she's got to stay out and take it." But the more representative tabloids are great little boats and deservingly popular.

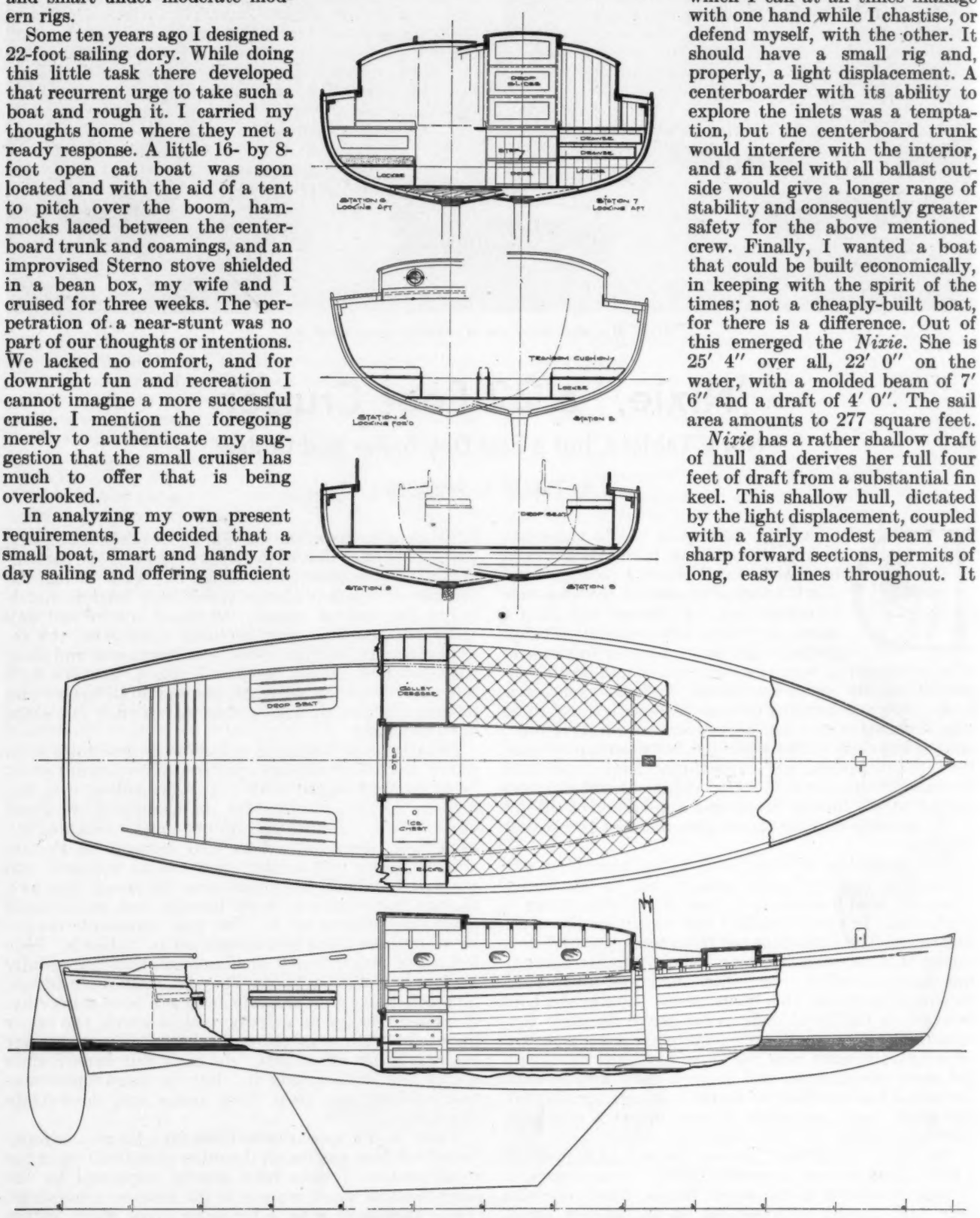
There would appear to be room for a far greater number of tabloids and for all the other classifications of the small cruiser. I have been greatly impressed by the large fleets of small cruisers in the European countries. There they have gone in for faster types which engage in class racing when not cruising. Some, such as the

Skerries, adopt the title of cruiser a bit carelessly, but they do cruise and do not necessarily pick their weather. On the other hand, there are to be found in abundance many other varieties quite unlike the long-ended Skerries except that they are of relatively light displacement and smart under moderate modern rigs.

Some ten years ago I designed a 22-foot sailing dory. While doing this little task there developed that recurrent urge to take such a boat and rough it. I carried my thoughts home where they met a ready response. A little 16- by 8-foot open cat boat was soon located and with the aid of a tent to pitch over the boom, hammocks laced between the centerboard trunk and coamings, and an improvised Sterno stove shielded in a bean box, my wife and I cruised for three weeks. The perpetration of a near-stunt was no part of our thoughts or intentions. We lacked no comfort, and for downright fun and recreation I cannot imagine a more successful cruise. I mention the foregoing merely to authenticate my suggestion that the small cruiser has much to offer that is being overlooked.

In analyzing my own present requirements, I decided that a small boat, smart and handy for day sailing and offering sufficient accommodations for semi-serious cruising, would be the answer. Chief among the conditions governing this decision was the mandatory assertion of my three youngsters, the oldest being seven, that they constitute a permanent fixture in the crew. Hence the small boat, one which I can at all times manage with one hand while I chastise, or defend myself, with the other. It should have a small rig and, properly, a light displacement. A centerboarder with its ability to explore the inlets was a temptation, but the centerboard trunk would interfere with the interior, and a fin keel with all ballast outside would give a longer range of stability and consequently greater safety for the above mentioned crew. Finally, I wanted a boat that could be built economically, in keeping with the spirit of the times; not a cheaply-built boat, for there is a difference. Out of this emerged the *Nixie*. She is 25′ 4″ over all, 22′ 0″ on the water, with a molded beam of 7′ 6″ and a draft of 4′ 0″. The sail area amounts to 277 square feet.

Nixie has a rather shallow draft of hull and derives her full four feet of draft from a substantial fin keel. This shallow hull, dictated by the light displacement, coupled with a fairly modest beam and sharp forward sections, permits of long, easy lines throughout. It

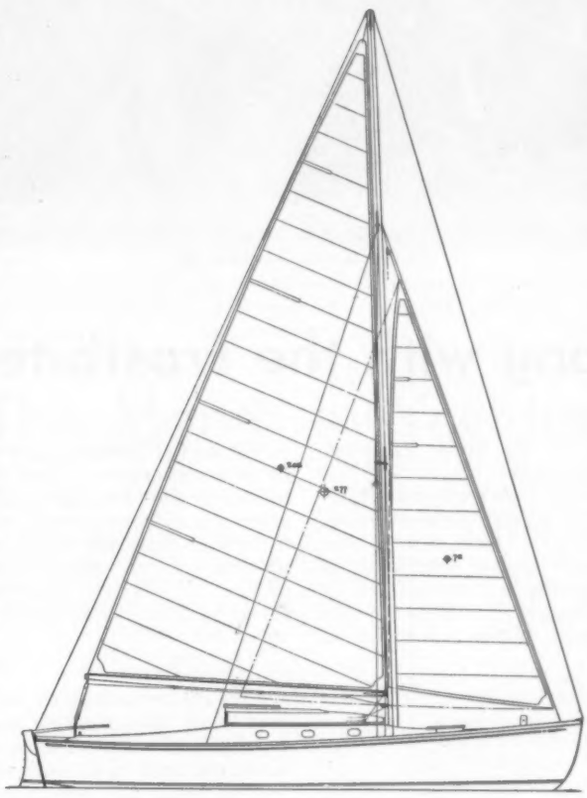


Accommodation plan, inboard profile and sections of "Nixie," designed by Philip L. Rhodes for his own use

might be suggested that the fin keel be carried forward somewhat and extended aft to carry the usual inboard rudder, thus producing a more normal underwater profile, or lateral plane. Since the fin keel shown is more than adequate in lateral plane area, and since the outboard rudder was adopted because of economy and simplicity, any addition to this keel would but add wetted surface, and add to the cost, all of which are to be discouraged in this particular case. The outboard dagger type rudder may have certain disadvantages, but I shall not list them, for I should be disposed to list the advantages, equally numerous. I am reminded by Bill Taylor that they have an affinity for lobster pots but, after all, the function of a rudder is to steer the boat and no other type is better qualified to do the job.

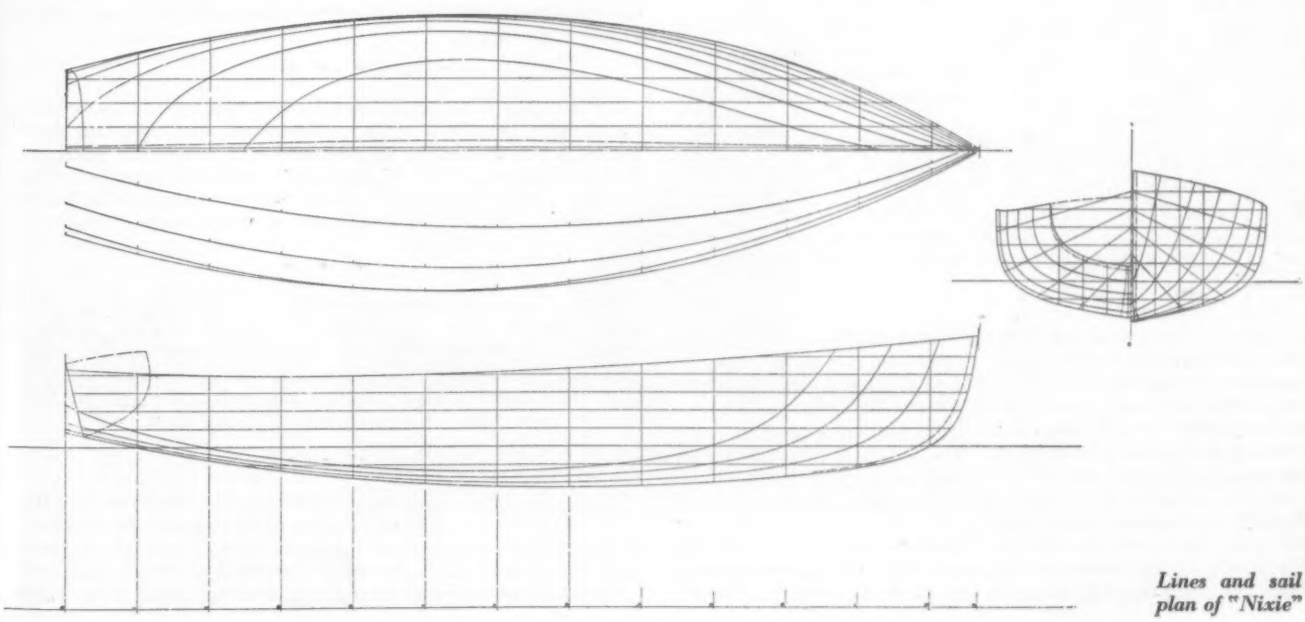
The freeboard is purposely liberal for a variety of reasons, among them, and most important, increased interior room without an excessively high cabin trunk, a deeper cockpit and, of course, greater dryness and reserve buoyancy. However, as measured in relation to the waterline length, the freeboard is close to normal modern practice. Regarding the deeper cockpit, while a small well cockpit and deck seats produce the safest of ballasted boats (other things being equal) I felt that a deep, watertight cockpit, with the coaming chest high on the youngsters, would add materially to their security and to my peace of mind. You may have observed that the coamings are perforated with a series of hand grip holes. This little innovation was added for their further comfort, and while the grown-ups find them a convenience it remained for Commodore George Bonnell to slander the good ship by referring to them as cockpit scuppers! The cockpit does have scuppers, four of them in the canvas-covered floor, and because the floor is but a few inches above the water each scupper has a soft pine stopper in it when the boat is underway in any considerable breeze.

It may be noticed that the cockpit has an average width of about five feet. It is six feet six inches long. Equipped with a cushioned 'thwartship after seat and two hinged side seats, it is both practical and comfortable. But these dimensions were chosen in order that this cockpit might augment the cruising accommodations. I faced the certain understanding that no matter how small the boat might be, I should be compelled to take the "crew" on one or two overnight cruises, nor should I care to deprive them of an early initiation in this branch of the sport. The two fixed berths in the cabin have duplicate mattresses. Two of these may be used in the cockpit, again employing a boom tent for shelter. The two main bunks and a small pipe berth forward furnish the required accommodations for these rare occasions, all of which smacks of the worst of tabloids. But these rare occasions are worth while and the boat is still a two-berth job.



The cabin is about seven feet long and has four feet of headroom, or full sitting-up room over the transoms. It has two galley dressers, one an ice box, the other equipped with drawers. The cabin is roomy and there is an abundance of stowage space for-

(*Continued on page 80*)



Lines and sail plan of "Nixie"

M. Rosenfeld

Some 200 spectators enjoyed watching 28 Frostbite dinghies race off the Harlem Yacht Club on December 4th

Along with the Frostbiters

THE Narragansett Bay Chapter of the North American Dinghy Association was formed on Sunday, November 27th, with a charter membership of sixteen, and six registered dinks. A committee was appointed, consisting of Miss Eleanor Wood, W. J. H. Dyer, chairman, and William G. Thurber, secretary-treasurer. Races have been held every Sunday since October 30th, and a trophy for the season's racing has been offered by Ellery H. Wilson and Frederick B. Thurber. The races are held from the Anchorage, Providence, where luncheon is served to contestants and spectators.

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Frostbiting got into full swing around Boston during December, the scheme of running half a dozen short affairs in place of a single race proving decidedly popular. A quartette of special dinks, a bunch of stock utility dinghies, and a dozen sailing tenders built before the war for the Savin Hill Y. C., provided fine sport for all. The more modern Class A dinks, after visiting Hingham, Marblehead and Providence, have settled down for the winter season in the Charles River Basin for Saturday and Sunday racing, much to the edification of hundreds who line the riverbank boulevards.

The most consistent performer has been Arthur Shuman's *Dirty Duck II*. Other winners have been L. H. H. Johnson's *Sinbad*, John G. Alden's *O. K. Delivery*, F. W. Goeller's *Ming Toy*, Chandler Hovey's *Emanon*, and Milton Stearns' *Tempered Air*. A fleet from the Providence Chapter trailed up on December 11th, and made a good showing among the local craft.

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Late in November the Knickerbocker Y. C., in Manhasset Bay, sprung a successful novelty in the form of a portable sound amplifier, which took the place of the usual megaphone in starting races and making announcements. The roar of the announcer's voice could be heard for half a mile or more against the howling of the winter nor'wester and the crashing of the dinks through the floating ice. When the announcer ran out of small talk, he switched to a phonograph record, precipitating informal warming-up dances among the shivering spectators on the pier. The same innovation was used successfully by the Harlem Y. C. on December 4th, and will probably be seen and heard at other races throughout the winter.

The fleet of Division 1, or special dinks, has been augmented by four newcomers — three designed by Charlie Mower and the fourth by Olin Stephens. All are beautifully constructed and equipped, and have proved very fast. Among the "gadgets" are revolving masts, the Stephens mast, with roller bearing step, proving decidedly successful. Gunter-Marconi rigs are used on all four craft. A fifth "Special," from Frank Paine's board, and sailed by Arthur Shuman, has shown great speed up Boston way.

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The special committee appointed to devise a satisfactory method of measuring sail area appears to be up to its neck in trouble, and has reached no definite conclusion at this writing. However, most of the sails measured so far have been found to be well within the prescribed area of 72 square feet, using two different methods of measurement, so that it appears as though the sail area bugaboo would eventually be settled in a manner satisfactory to all.

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Some of the best racing talent in the country will be found in the dinghy fleet in almost any regatta. Just try your hand among a bunch of skippers including Bill Inslee, Bill McHugh, Arthur Knapp, Lorna Whittelsey, George, Ernest and Colin Ratsey, Corny Shields, Bill Swan, Arthur Shuman, Ted Clarke and others. Do they look like a lot of pushovers?

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From Boston comes a report that several V-bottom dinks, conforming in every way to the restrictions of Class A, are in course of construction. A well-designed V-bottom dink might well be a satisfactory utility boat, and cost appreciably less than the round bottom type. If they sail well and cost but little money, they'll be a welcome addition to the fleet.

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One of the stock dinghy builders is about to turn out a 10-foot dink for those who consider that the 11-footers are unnecessarily large and cumbersome for a tender to a small auxiliary or power boat. This looks like a move in the right direction, and we'll have a look at the newcomer at the coming Motor Boat Show.

P. & A. Photos

Bark "Star of England," formerly the "Blairmore." She has been purchased by a West Coast yachtsman and fitted out for a world cruise after being laid up at Alameda for several years

The Month in Yachting

You Can't Keep a Good Ship Down

DOWN at the foot of Paru Street, in Alameda, lies the pitiful little remnant of what was once one of the largest fleets of square-rigged vessels sailing under the Stars and Stripes. There aren't many of them, now; all are on the inactive list, and many of them have been sold. Only a few remain, and their naked yards, once straining to the pull of billowing canvas, serve chiefly as roosts for sea birds. The Alaska Packers Association, which owns these veterans, has definitely "quit the sea and gone into steam." No more will skippers of their ships and barks match wits on the race home from the Unimak Pass, with the season's pack of salmon neatly stowed away beneath their hatches.

At the end of one of the Paru Street piers there lay, until recently, the able little bark *Star of England*. She has been sold now, but unlike many of her sisters, she has been sold to a far happier fate than that of being cut up into scrap metal. She is going on a cruise around the world. Edward E. Grieve, of Los Angeles, has bought the bark and has had her fitted out to realize his ambition of a long cruise in his own square-rigger. He is taking a party of scientists, authors and artists, and plans to sail completely out of the depression area.

The *Star of England* has had an eventful career, as the prim Victorian dame who peers out from under her bowsprit could unfold. But she is only wood and maintains a discreet silence. She has had several names and was known as the *Abby Palmer* when the Alaska Packers first bought her. But on her big ship's bell forward, at the break of the fo'c's'le head, there is neatly incised the single word *Blairmore*, the name she bore when she was launched at Dumbarton, Scotland, back in 1893. This was enough to awaken memories of a tale of disaster seldom equaled in the annals of the waterfront of San Francisco. Faded newspaper clippings supply the details of the tragedy.

As the Greeks made 'em 2,000 years ago. A sweet little 11-foot keel sailing "dink" brought from Tarpon Springs, Florida, by Slade Dale and sailed in a Frostbite regatta last year

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The night of April 8, 1896, saw San Francisco Bay lashed by a strong southwesterly gale. All night long it blew, and even by morning the blustering winds showed little sign of abating. Among the vessels lying at anchor off the southeastern part of the city was the British full-rigged ship *Blairmore*. She had arrived in February, but charters were low, and she was "waiting for something to turn up."

In the morning, a strong tide was setting against the wind, and the *Blairmore's* cable led across, under her forefoot. She had only a nominal amount of stiffening in her hold, and she began to heel menacingly. The tug *Active* came up and asked if she wanted help, but as no one aboard realized the danger, the offer was declined. The first mate and ten men went down into the hold for their scheduled task of chipping and cleaning, and the ship continued to list. It soon became apparent that wind and tide were too much for the heavily sparred ship. Soon the fore, main and cross-jack yardarms were dipping into the waters, and then the lower and the upper topsail yardarms. Captain Caw, seeing that she was not going to recover, shouted for the men to save themselves. By now, ballast and bits of dunnage were tumbling

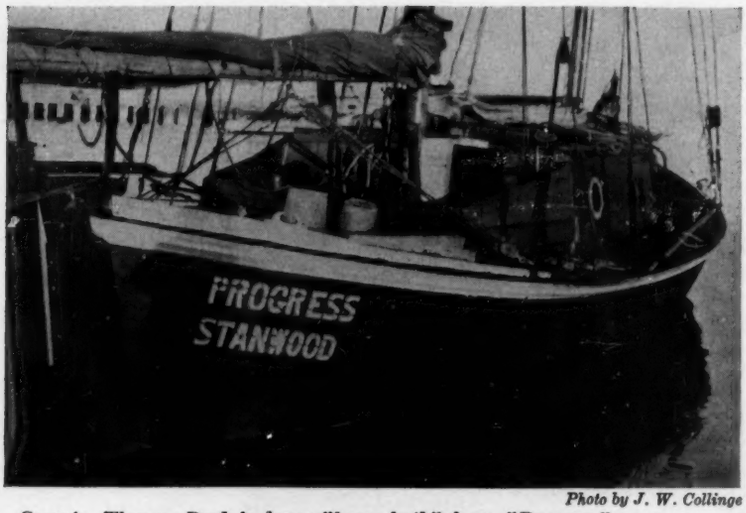

Photo by J. W. Collinge

Captain Thomas Drake's latest "home built" boat, "Progress," now on a voyage from Seattle to Honolulu

into the lee bilge, and the struggling men were having a time of it in their efforts to escape. A torrent of water leaped through the main hatch, carrying a capstan bar, which struck the mate from the ladder and back into the lower hold, together with four others. The *Blairmore* went over more rapidly now — so much so, in fact, that the steward, in the galley, was trapped by the rush of water, and was actually drowned in the deckhouse itself.

It was all over very quickly. Where a full-rigged ship had swung to anchor a few minutes before, there was now nothing but her bilge showing. Near by lay the ship *Cromdale*, which boasted a prize-winning race boat crew — and never did those brawny seamen get a boat into the water so quickly, nor pull so valiantly as they did from the *Cromdale* to the stricken *Blairmore*. Other boats came from other ships anchored near by. They picked up the men who were clinging to the wreck, or struggling in the choppy water.

The tug *Rockaway* soon arrived, with a crew of men from the Union Iron Works. As they clambered onto the *Blairmore's* plates, they could hear the imprisoned men beating against the inside of the hull. Quick calculations were made; the depth of water, and the beam of the ship, convinced them that she was lying on her side, on the bottom. An 18-inch square was chalked onto her side, and with chisel and sledge they fell to on her staunch iron plates. Meanwhile, the tide was rising rapidly, and imprisoned air, escaping through ventilators and ports, was spouting in yellow-green geysers around the ship. The workmen cut until only a thin ribbon around the square held it in place. Water was lapping at their feet as they fell upon the weakened plate with their sledges, and drove it in.

Then came a scene which defies description. The loosened plate dropped away; the air in the hold, released, roared out, mingled with the lapping water around the opening, and sent a spouting fountain of spray far into the air. The hull lurched sickeningly from beneath the feet of the workmen, and *Blairmore* sank further into the mud on the floor of the bay. The imprisoned men were drowned, and the workmen themselves barely escaped with their lives.

In time, *Blairmore* was raised and towed to a pier and left there, to become the center of some of the weirdest stories along San Francisco's waterfront. Eventually, the ship was sold. She was cut down to a bark, and renamed *Abby Palmer*. She wandered around in various trades, was once reported dismasted off the Columbia, and finally wound up in the Alaska Packers fleet, in which she sailed as the *Star of England*.

The *Star of England's* record while she was with the Packers shows that she is well suited to the use her new owner has in mind. The cumbersome top-hamper which brought tragedy to *Blairmore* on that wild morning 36 years ago has been removed, and men who have sailed with her in her later days are not at all backward in calling her as handy a bark as one would care to sail.

It ought to be a grand cruise, and the *Star of England's* new owner will take with him the good wishes — and perhaps the envy — of scores of small-boat sailors whose thrill of looking aloft into bellying topsails and topgallants must come vicariously from the printed page.

G. F. MacMullen

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Captain Drake At It Again

THAT indefatigable sea rover, Captain Thomas Drake, has built himself another boat and is now bound from the Pacific Coast to Honolulu — and wherever else his fancy dictates. Captain Drake lost his last boat, the *Pilgrim*, off the Dutch coast a few years back while on a leisurely world cruise.

His new boat is named *Progress*, and as usual, she is the product of his own hands. Our good friend J. W. Collinge, of Santa Barbara, sends us a picture of this new craft, and has this to say of her: "Had a gam the other day with Capt. Thomas Drake aboard his new schooner *Progress*, bound for Honolulu from Seattle. The little man was quite happy — no depression bothering him. His hull and motor looked O. K. but the house and gear — well, no two pieces seemed to be mates. The waterlines are fairly fine but the deck is as blunt as a Dutch Canal boat. The bowsprit is a reefing one. The house top looked like sanded composition roofing, with not even a toe rail amidships to steady one. Cap Stan should be happy as she is a double-ender, like his baby. The motor is aft in the cockpit."

Well, good luck, old timer, on your latest adventure.

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"Islander" Arrives at Los Angeles

GEORGE BONNELL tells us that Harry Pidgeon and his world-girdling *Islander* arrived home at Los Angeles on December 5th after a good passage from Panama. *Islander* sailed from Port Chester last June, and stopped at Bermuda, St. Thomas, and Panama enroute.

The first of the new one-design class of small racing cruisers for Lake Erie, built from plans by R. A. and R. W. Luedtke published in "Yachting," April, 1932. The boats are called the Lake One-Design Class

The "Land Crab," devised for teaching youngsters the principles of sailing on shore. She will do everything but sink

And Now the "Land Crab"

SOMETHING unusual in the way of a boat for teaching "the young idea" to sail is shown in the accompanying photograph of the *Land Crab*, designed and built by A. E. Luders for his small grandson, six-and-a-half years old. Pivoted to heel either side and to swing in the arc of a circle, the boat has proved a great success. She heels easily, and can be put about in a breeze by letting flow the Genoa jib, and the youthful skipper cannot capsize her. As her builder says, "She is a real Frostbite yacht, as she is now in daily use and does everything but sink."

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Conditions for St. Petersburg-Havana Race

THE final conditions for the fourth annual St. Petersburg-Havana Ocean Race have just been received from L. L. McMasters, the general chairman for this event, which is proving more popular with cruising yachtsmen every year. The start is scheduled for April 1st, 1933, from St. Petersburg, the course taking the contestants to Rebecca Shoals Light and thence across the Gulf Stream to the finish line off Morro Castle, Havana, a distance of 284 nautical miles. A number of entries have already been received, and there is every probability of several yachts from northern waters being at the starting line.

The race will be sailed in two classes, as follows:

A. Yachts not over 85 feet overall length and not under 45 feet overall length.

B. Yachts not over 45 feet overall length.

The handicapping formula and time allowances are:

$$\frac{LOA+\sqrt{SA}}{2} = \text{Rating}$$

LOA — Measurement to be taken in feet and tenths at the centerline of the hull from the extreme after point of the transom cap to the intersection of the deck with the fair line of the stem, or stem extended.

SA — Measured area of working sails (those used when beating to windward) plus 50 per cent of the area of light sails (those not used in windward work).

Single mast yachts to be rated at 110 per cent of the formula rating.

For Class A: Time allowance to be figured upon a basis of 18 minutes to the foot of rating, for the course.

For Class B: Time allowance to be figured upon a basis of 23 minutes to the foot of rating, for the course.

Yachts without propellers, or without their usual cruising propellers in place, or with apertures closed, shall give an additional allowance of one hour for the course.

Race circulars and entry blanks may be had from L. L. McMasters, c/o St. Petersburg Yacht Club, St. Petersburg, Florida, or from YACHTING, 205 East 42nd Street, New York City.

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"Miss America X's" Record Boosted

IN CONFIRMING the mile speed record made by Gar Wood in *Miss America X* on the St. Clair River, off Algonac, Mich., September 20th, the International Motor Yachting Union gives the American boat a slightly higher speed than that originally claimed. The record submitted by the Yachtsman's Association of America was 124.71 statute m.p.h. The International Union figures the speed and recognizes a record of 124.86 m.p.h. Here are the details of the two nautical-mile runs over the measured course:

First Lap 33 32/100 seconds = 108.04 nautical miles
Second Lap 33 5/100 " = 108.92 " "

Mean, 108.48 nautical m.p.h. = 124.86 statute m.p.h. = 200.9 kilometers p.h.

Some speed, we'll say!

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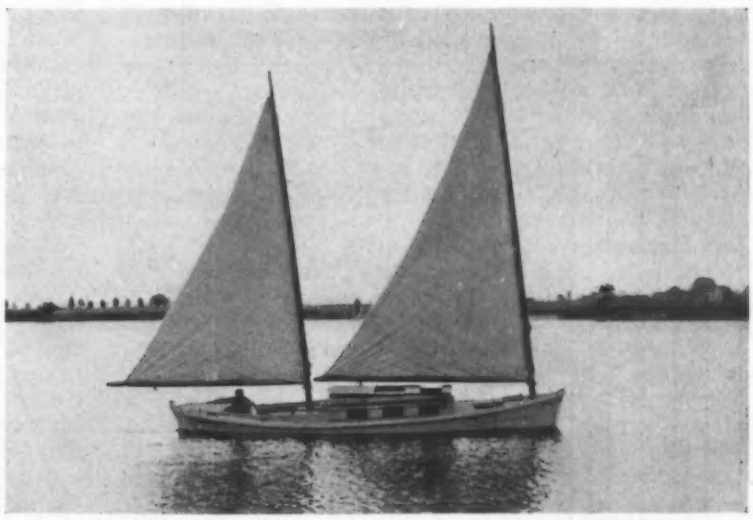
Outboard Speeds Go Up

OUTBOARD motorboat speeds, ever mounting, reached a new high mark in 1932, both for one-mile trials and five-mile competition. The present one-mile outboard record is 58.91 m.p.h. made by "Art" Sauerberg, of St. Louis, at Bay City, Mich., in October, and the five-mile mark is 50.70 m.p.h. made at Tulsa, Okla., in October by Fred Nickell, of Granite City, Ill. These records mark an increase of 2.385 m.p.h. for the mile and 2.443 m.p.h. for five miles over the top performances of 1931.

Edison Hedges, of Atlantic City, N. J., set a new 125-cubic-inch Class competition record of 37.637 m.p.h. with his *Flying Eagle* at Albany, N. Y., in July, and in September he drove the same craft to victory in the National 125 Championships at Ocean City, N. J. A new Class A inboard runabout one-mile mark of 34.108 m.p.h. was set by Frank Wigglesworth at Worcester, Mass., in May. Ross Maddocks, driving in the same regatta, set a competition mark of 34.43 miles an hour.



"Wood Duck," a 33½-foot sharpie built by R. H. Wiley for Glenn Stewart from the plans by H. I. Chapelle in the May issue of "Yachting." She has worked out well. A 16 h.p. outboard furnishes auxiliary power

"Beaverette" (left) and "Cypher," runner-up and winner of the Marblehead Perpetual Challenge Trophy, which the two skippers are holding

A New Model Yacht Class

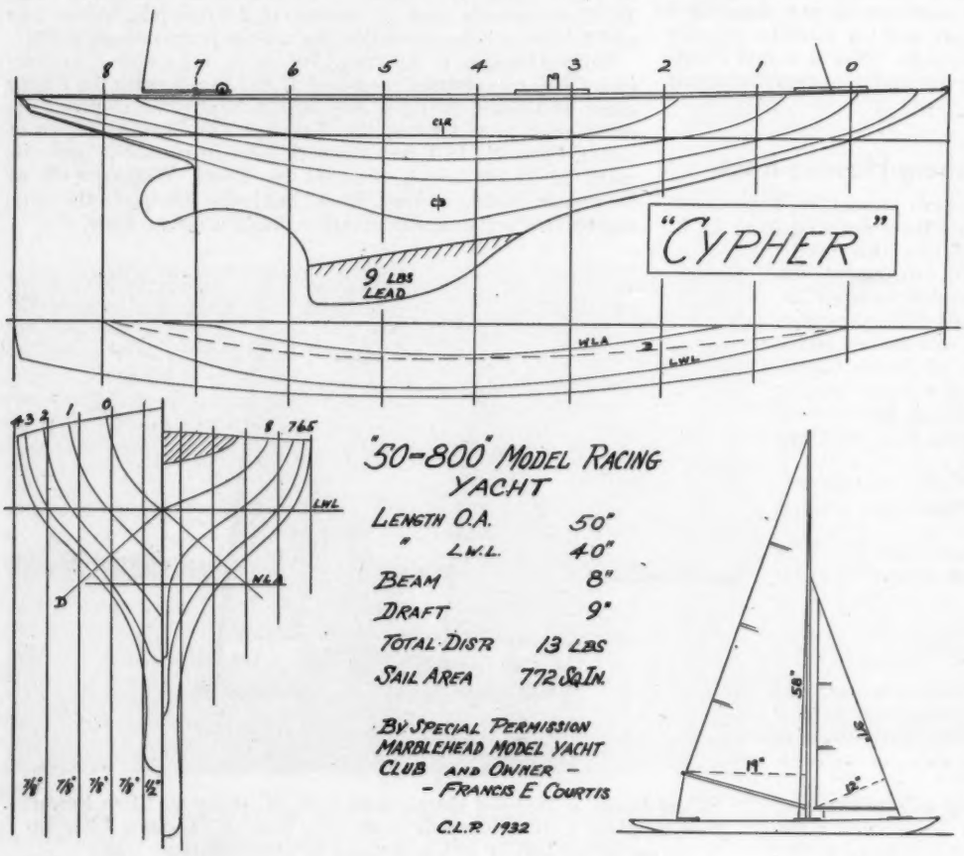
By C. L. PATTEE

A NEW perpetual challenge cup for model yacht racing that will undoubtedly do much to arouse interest in a new class of model yachts was placed in competition this year, and the first races for its possession were sailed on Redd's Pond, Marblehead, late last summer. The trophy, known as the Marblehead Model Yacht Club Perpetual Challenge Cup, is for competition in the so-called "50-800" class. With four clubs racing for it on two successive days, it was finally won by the *Cypher*, Francis E. Courtis, owner, of the Marblehead Model Yacht Club.

This class of model boats is built under rules which allow plenty of latitude as to load waterline length, beam, type of mid-section, and displacement. The overall length, however, is to be 50 inches (with a tolerance of ¼-inch either way), and the sail area is not to exceed 800 square inches. There are a few other restrictions, such as barring the use of fin (metallic) keels, movable keels, center and bilge boards, wide spars, long and numerous sail battens, and similar things which have a tendency to encourage radical design and racing freaks. It may be said, truly, that all four boats entered in this year's contest were wholesome craft of considerable beauty.

The class is turning out to be very popular, having been adopted by the Model Yacht Racing Association of America. Reports of clubs throughout the country indicate that model boat racing enthusiasts have welcomed a well-

(*Continued on page 82*)



The Gloucester "Sloop Boats"

A Development of the North Atlantic Fisheries

By H. I. CHAPELLE

IN SPITE of the fact that the Gloucester fishing schooners are well known to all yachtsmen, the fishing sloops of the same port are rarely mentioned. These sloops were among the largest seagoing vessels of this rig employed on our coasts. They were fast and seaworthy and, of equal importance to the fisherman, they were good carriers for their size. Their length ranged all the way from 40 to 60 feet overall, but the popular size was about 50 feet. Usually, they had short quarter decks with the cabin trunk aft. This was not universal, however, as some had flush decks and some had the trunk forward. The smaller boats were but little different from the Friendship sloops of Maine; in fact, some of these were purchased by the Gloucestermen. The larger sloops were practically miniature fishing schooners in hull. The type has now almost disappeared, having been replaced by power boats, so that it is time that they be recorded.

The history of the sloop in the fishing trade reaches back to colonial days. Sloops were employed in all trades along our coasts from somewhere around 1700 to about 1795, by which time the schooner had very nearly driven the older rig out of the larger craft. Occasionally, some of these large sloops were used for fishing in the North Atlantic. Certain ports seem to have owned more sloops than others. Scituate, Charlestown, Boston, Salem, Beverly, Gloucester and Newburyport, all had rather large fleets of vessels with this rig during colonial days. However, it is probable that few or none of these boats were built for the fishing business alone; rather they were built for general purposes, and were used as fishermen only when it was profitable so to employ them. At other times they were traders, coasters, packets or produce boats.

In type, the early sloops were full-ended craft, having a somewhat barrel-shaped midsection and some drag to the keel. The sloop rig then popular differed much from the rig as we now know it, as it had square topsails and a square course as well as two or three headsails and a gaff mainsail, loose-footed. Such vessels were more carriers than clippers, and were rarely over 60 feet in length. These boats, and their successors, the more modern gaff-topsail sloops, were, in turn, occasionally used as fishing vessels, particularly in the shore and market fisheries, from 1800 on. None the less, the sloop rig was neither numerous nor popular in the fishing fleet during the period of the Chebacco boat and Pinky (1800–1850), as these types fulfilled the requirements of the fishermen far better than the contemporary sloops.

The first real impetus which the sloop rig received in the fishing fleet came in the 50's and 60's of the last century. A large number of Irish fishermen, many of whom were from County Galway, settled in or near Boston during this period. These men had been brought up in the "Galway Hooker," one of the few Irish types of sailing craft. The "hooker" was a small, cutter-rigged boat, about 35 feet long and 11 feet 3 inches beam, drawing 5 feet 8 inches of water, loaded. These boats were full-bowed, with low, round floors and some drag to the keel; they were rather good sailers, though crude in build and rig. Their rig was that of a bald-headed cutter with two headsails. The Irish built a few of these at Boston, and American builders, when similar boats were ordered, improved on the type. The so-called "Boston cutter" or "Irish boat" was the result. These boats had the same rig as that of the "hooker," but the hull was quite different, having more deadrise and sharper lines. The "Boston cutter" was not particularly handsome, having a nearly vertical stem and a heart-shaped transom, also set nearly upright, combined with too little sheer. However, they were good sailers and were popular with the Boston Irish. Eventually they became very common in Massachusetts Bay and so were well known to the Gloucestermen, particularly after the Civil War.

The Gloucestermen had replaced their Pinkies with larger schooners during the 50's, a period of great prosperity in the fishing business, except for the last three years of the decade. During the 40's, the method of selling fish had changed; the old way of selling direct to marketmen, or peddlers, was replaced by wholesale selling through auction. Open bidding made the daily fluctuation of prices much wider, and the middlemen created by wholesale buying usually paid the highest prices to the first arrivals on certain days. This condition made speed in the fishing vessels a necessity. The large schooners of the 50's and 60's were the result of the need of speed, but the great financial depression of the early 70's gave this class of vessel a great setback. The depression was followed by the ruinous Canadian Treaty, and by other blows to the fishing industry, the result being the financial ruin of many schooner owners and the slump in the building of new vessels of this class. Therefore, many fishermen turned to the sloops, some of the Gloucestermen buying "Boston cutters." The Gloucestermen, however, had an aversion towards the Boston boats, preferring Essex-built craft. Hence the Essex designers developed another type of sloop, which soon became popular as it was found that very small schooners were not fast enough to compete with sloops.

During the 1880's, the sloops, or rather, to give the boats their local name, "sloop boats," became rather popular, particularly in the 'longshore and market fisheries. The years between 1880 and 1907 saw the rise and fall of the "sloop boats" in the Gloucester fleet. The first sloops built at Essex, and those built afterwards at Gloucester, differed greatly from the earlier Boston boats. The "sloop boats" were sharper-ended and had more deadrise and some hollow in the garboards; also, they had counters. The new type was variously known as "Essex sloop boat," "Gloucester sloop boat" or "Salem sloop boat." On Cape Ann, "sloop boat" was a term applied to sloops smaller in size than the standard fishing schooner. A similar term was applied to small schooners, *i.e.*, "schooner boats." In other words, the addition of "boat" to the name of the rig was the diminutive of "sloop" or "schooner." Eventually, "sloop boat" was applied to all sloops, through usage.

Though the first "sloop boats" were built at Essex, nearly all those built after 1882 were laid down at Gloucester. As a rule, they were built during the slack season, when the builder desired to keep his gangs

intact; usually this was during the summer. As a result, most of these boats were built on speculation and kept in the yards in an unfinished state until sold. In Gloucester, most of the owners of this type were Americans and Portuguese, while in Boston they were usually Irish. Many owners of large fleets of fishing schooners began their careers as sloop boatmen. The "sloop boats" replaced the "Boston cutter" in the Boston fleet during the 80's.

While nearly all of the Gloucester, and some of the Essex builders put up "sloop boats," the majority were built at Gloucester by Thomas A. Irving and by the Bishop brothers, John and Hugh, both of whom had yards. Tom Irving modeled most of the "sloop boats"; in fact, fully 90 percent were from half-models made by him between 1890 to 1906. Irving was not only a fine carpenter but an excellent designer as well. He built many sloops and schooners on his own account and at times was employed as foreman by the other builders. The Bishops may have modeled sloops and schooners. As their vessels were marked by unusually long counters, seen in the work of none of the other builders, it seems reasonable to conclude that at least one of the brothers did some modeling. Most of their vessels were from models made by others, however, many of which were Irving's work.

It is difficult to decide how much the "sloop boats" were influenced by contemporary yachts. At first glance, these boats look very much like the clipper-bowed cutter yachts of the late 80's. However, their hull form and proportions differed greatly from those of the yachts. The Gloucester sloops were more like the large fishing schooners in hull form. The effect of the designs of yacht architects on the fishing fleet has been much overrated and their influence is more apparent than real. The most successful of these designs have been those that followed the type developed by the Essex modelers most closely, though the fishing schooners designed by Edward Burgess were excellent examples of well-proportioned designs.

The Essex modelers were rule-of-thumb designers, yet their work was on a par with that of contemporary yacht designers. The explanation lies in the manner in which each class developed — the fisherman through a long process of trial and error, while yachts are molded by fashion, theory and racing rules. In the latter type of boat, theory was too often contrary to fact, and the effect of racing rules has been admittedly a handicap to advance in yacht design. The modelers of fishing schooners and sloops, however, were influenced by the requirements of the trade, and to a minor extent by the prejudices of the fishermen. The demand for speed, combined with seaworthiness and capacity, ruled the design of fishermen from 1850 to the time of the introduction of the power boat.

Figure 1 shows the lines of a flush-decked, plumb-stemmed "sloop boat" built at Gloucester during the winter of 1898–99, by John Bishop. Her name was the *Vesta*. Archer Poland, the Essex loftsman, laid her down in September, 1898. I have been unable to discover who made her half-model, but as she has the long counter mentioned earlier she may be the design of one of the Bishops. In some ways she is reminiscent of the Boston pilot schooners and of the plumb-stemmed fishing schooners designed by Dennis J. Lawlor. In spite of her sharp ends, the full 'midsection gave good carrying capacity while its shape gave initial stability. The hull form is indicative of great speed reaching and running, while the sharp entrance and large lateral plane, combined with depth, must have made this sloop a good performer to windward. The hull is a form that would move through the water with little fuss, and would require little power to drive, considering the large displacement. This model has been universally admired, and apparently earlier sloops were built from it, judging by the dimensions of sloops given in the enrollments in the Gloucester customs house. While such identification is doubtful, still, the model appears to have been made about 1890, and is representative of the earlier sloops of that period.

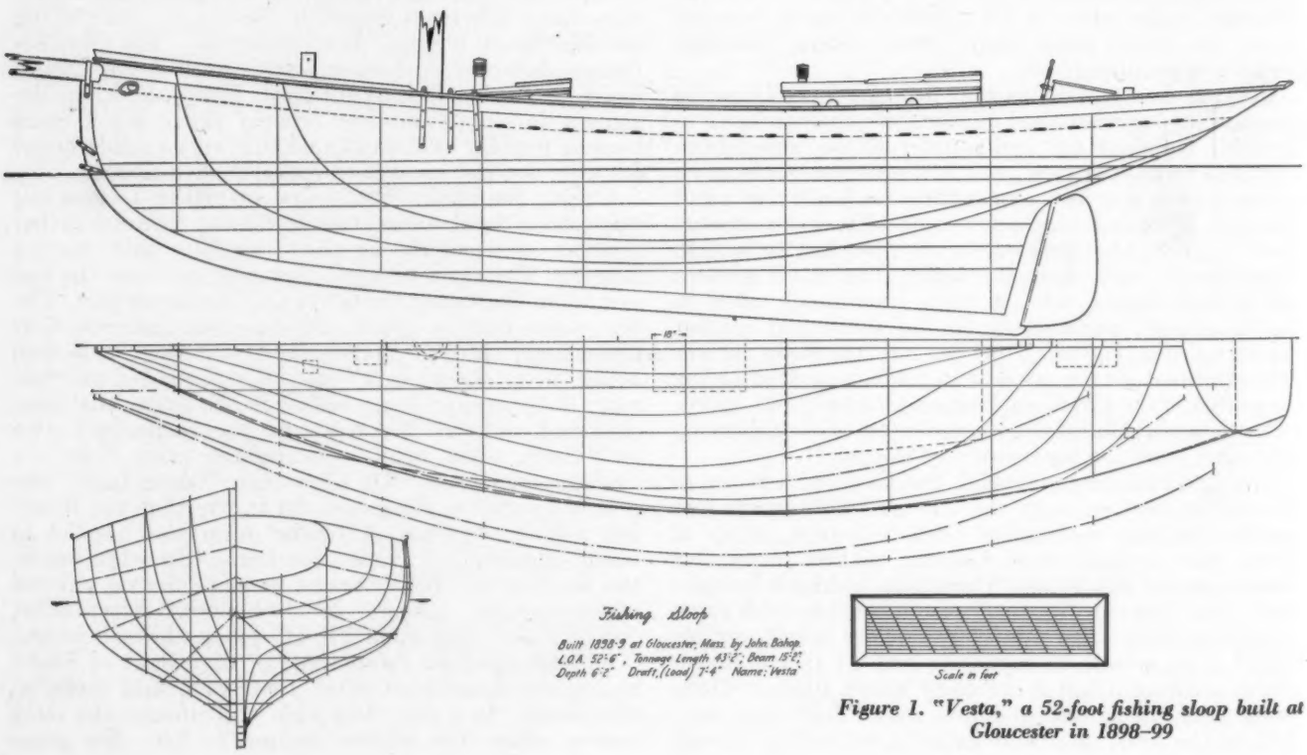

Fishing Sloop
Built 1898-9 at Gloucester, Mass. by John Bishop
L.O.A. 52'-6", Tonnage Length 43'-2"; Beam 15'-2"
Depth 6'-2" Draft, (load) 7'-4" Name: Vesta
Scale in feet

Figure 1. "Vesta," a 52-foot fishing sloop built at Gloucester in 1898–99

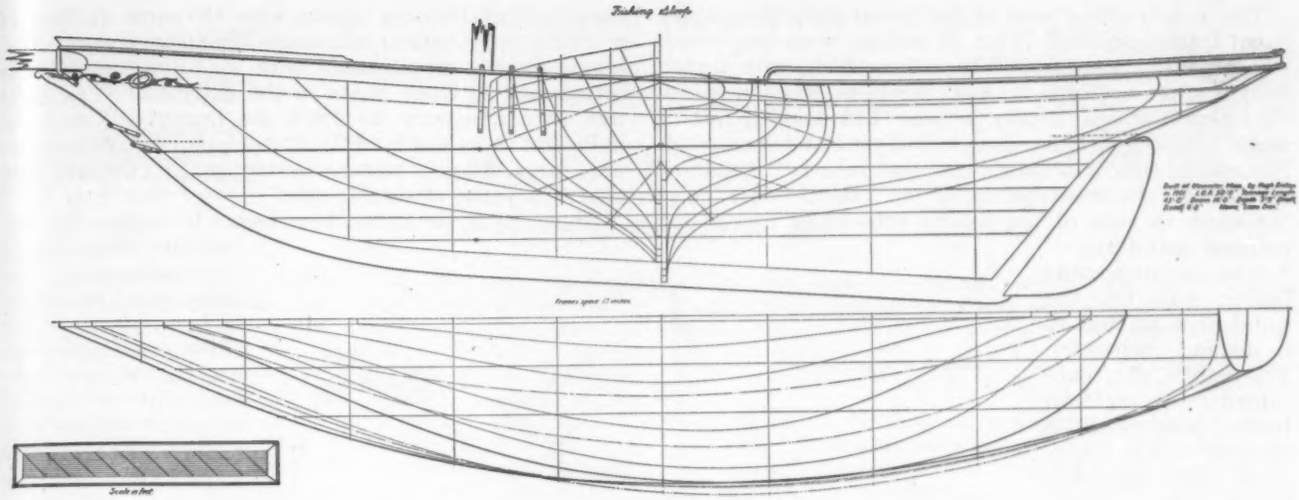


Figure 2. The "Laura Enos," built in 1901, represents the type popular at the beginning of the century

The deck arrangement is more or less typical of the "sloop boats." At the stern there is a wheelbox, with quarter bitts on each side, forward of which, in the order named, are the cabin trunk, the main hatch, the forecastle companionway, mainmast, forepeak hatch, windlass and riding bitts. Some sloops had two hatches amidships, both on the centerline. Occasionally the forecastle companionway was forward of the mast. If the boat was used for trawling, the trawling winch was usually forward of the mast. Most boats had a break in the deck just forward of the trunk. Some of the smaller boats had the trunk forward, the mast passing through its roof in some of these.

Figure 2 shows a smaller boat built by Hugh Bishop, a brother of John, at Gloucester, in 1901. This boat was modeled by Tom Irving and has a short quarter deck, in the manner usual in these craft. The name of this sloop was the *Laura Enos;* she represents the type that was popular at the beginning of the present century. The size of boat shown was the most common in the 'longshore fisheries. The changes in hull form that took place in the fishing fleet between the time of the building of the *Vesta* and of the *Laura Enos* are plain in the lines of these two boats. The *Enos* has a more marked hollow in her garboards and a more cutaway forefoot than had the *Vesta,* as well as more beam in proportion to length, and harder bilges. The last two items, however, were due to the smaller size of the *Enos* and, hence, her need for greater relative stability, rather than to a change in hull form in the fleet. It must be added, however, that Irving's models usually show more hollow in the garboards and harder bilges than do the models by contemporary designers. The *Enos* has a somewhat narrower transom than was usual; her sheer, like that of most of Irving's models, was rather straight.

Figure 3 shows the lines of a larger "sloop boat" by the same modeler, built at Gloucester in 1902. This boat was of the largest class of sloop-rigged fishing boats on our coasts. Few as large were built at Gloucester or Essex and fewer yet were for the local fleet, as the Gloucestermen preferred the schooner rig in such large hulls. I have been unable to identify this sloop or to find the name of her builder for a certainty, but I think she was built by Irving for Boston parties. So large a flush-decked vessel was unusual in the fishing fleet. It is an interesting fact that some "schooner boats" were built on the same general model. All these sloops have one feature in common, their long run with rather straight buttocks. Most of them trimmed more by the stern than the plans indicate, which made the freeboard at the bow greater than shown. Some had more outside keel, 12 to 14 inches being the most common length.

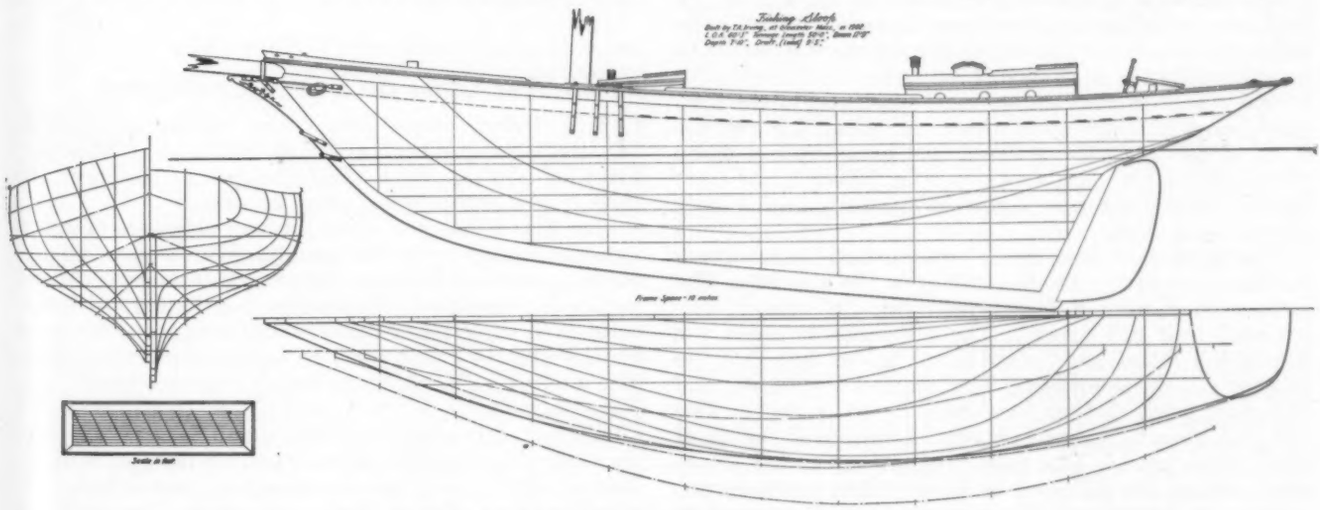


Figure 3. A 60-foot fishing sloop, 1902. Few as large as this were built

The construction was of the usual fisherman type. Sawn frames, spaced 17 or 18 inches, were employed. The planking was about 1½ inches thick, with 2-inch fender strakes. Timbers, keel, keelson, were of white oak; planking was usually of pine. The decking was of white pine, oiled. The ceiling was of pine and hardwood. Fastenings were galvanized iron and locust "trunnels." In general, the construction of the "sloop boats" was the same as that of the fishing schooners, except for reduced scantlings.

The arrangement below was on the same plan as that of a fishing schooner. The cabin, aft, contained two to four berths, lockers and a heating stove; amidships was the fish hold. Some sloops, built for owners at other ports than Gloucester, had fish wells. Forward was the forecastle, containing from four to twelve berths, according to the size of the vessel, and the galley.

The large sloops carried as many as eight dories, nested on each side of the main hatch, amidships. The number was subject to the kind of fishing done, of course. This consideration also had some effect on the deck arrangement, particularly on the location of the forecastle companionway. The finish above and below deck was strong, cheap and practical, rather than handsome. The ballast was all inside, and consisted of concrete and loose stones or gravel, some scrap iron being used occasionally. The "sloop boats" were painted black, with white or gray trunk and hatches; the inside of the bulwarks was gray also. The railcap was usually white, or finished in oil. The waist line, about halfway up the bulwarks on the outside of the hull, was set off by a gold stripe; this was an inch or so below the waist line and above the scuppers so as not to be stained by the drainings of the deck.

A few centerboard sloops were employed in the fisheries, most of which were owned at Salem. I found the lines of but one; she differed but little from a sloop yacht of the late 70's or early 80's. These boats were neither numerous nor highly developed, and hardly constitute a type.

The rig of the "sloop boats" was that of the American modification of the English cutter of the late 80's. The sails carried were a forestaysail jib, jib topsail, gaff mainsail and gaff topsail. The difference between the rigs of the cutter and "sloop boat" lies in the spars, the bowsprit of the sloop being fixed instead of running, and the mast being farther forward than the cutter's. The sail plan shown, Figure 4, is representative of the rig of the "sloop boat." The spar proportions varied somewhat among the different builders. When auxiliary engines were introduced, the rigs were much reduced in size and topmasts were rarely fitted. The details of standing and running rigging were the same as those of contemporary fishing schooners. The early sloops had hemp rigging throughout; wire standing rigging was introduced in these boats in the early 90's. The large rigs were necessary to drive the heavy displacement hulls, but there was no difficulty in handling as the crews were large. All gear was much stronger and heavier than that of a yacht of similar size.

About 1906, the power boat began to replace the out-and-out sailing sloops and schooners (the first gasoline auxiliary was launched in 1903), and from then on the sloops were sold out of Massachusetts waters very rapidly. Because the reputation of the "sloop boats" was so well known, the boats in good condition were in great demand. Unfortunately, few of these sloops were bought by yachtsmen, as the type of yacht then fashionable was markedly different from the fishing sloop. It will be recalled that the first decade of the present century was the period of popularity of the "fast cruiser" of extreme proportions and design, the result of the old "length and sail area" rule. At the present time few of the "sloop boats" are to be found on Massachusetts Bay. Only one is used as a fishing boat at Gloucester, and another is employed as a yacht.

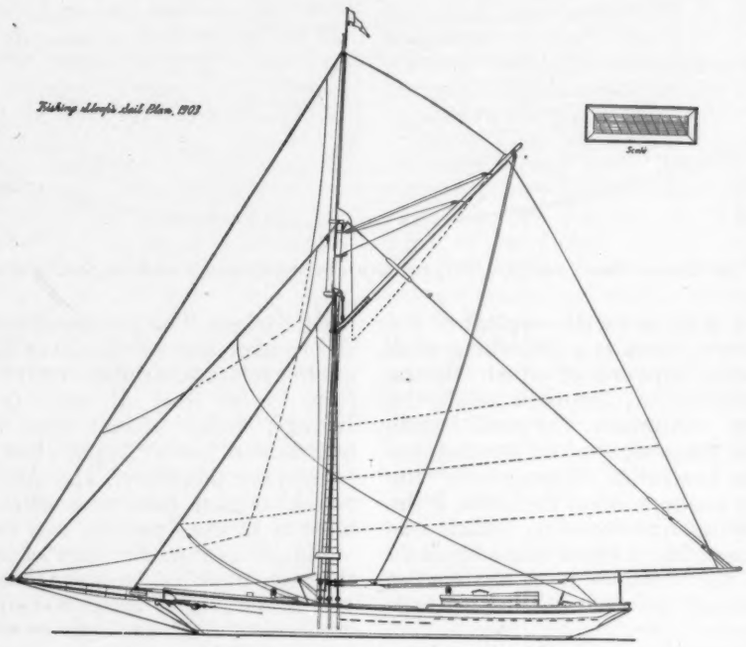


Figure 4. Typical sail plan of Gloucester sloop, 1903

The "sloop boat" influenced the well-known Friendship sloops, and now we see a trend towards a similar type in yacht design. It would seem that a sloop on lines similar to the type under discussion would make a satisfactory deep-water racer, if the performance of such heavy boats as *Jolie Brise* is any criterion.

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Star Class on Every Continent

THE International Star Class announced recently that it has granted its 65th charter to the Filippeville Fleet, of Algeria. With the formation of this fleet the class is now organized in every continent.

The Star Class will open its long schedule of international racing with the annual Mid-Winter Championship series at Havana, beginning January 26th and lasting for one week. This series, for the Cup of Cuba, consists of three races, and another series of three races for the Bacardi Trophy will be sailed on alternate days. The week will close with the annual International Team Race between the U. S. A. and Cuba. In addition to a number of entries from the States, San Sebastian, Spain, has stated that it will send over two challengers. Eugene Kelley, of Cannes, has remained in this country to participate in the Cuban race week, representing Cannes, France.

A Happy New Year For Motor Boating

By

GEORGE W. SUTTON, JR.

THE visit of George H. Townsend, president of the American Power Boat Association, and J. Lee Barrett, official American delegate representing the Yachtsmen's Association of America, to the annual meeting of the International Motor Yachting Union, in Brussels, was a complete success. Some very clear thinking was done by the assembled delegates of the Union, composed of the motor boating interests of 22 countries, and this thinking, expressed in half a dozen different languages and interpreted to the various delegates by Maurice Pauwaert, whom Mr. Townsend reports one of the most efficient secretaries a motor boating body ever had, produced results which should cause the greatest harmony and progress in international racing.

For three days the assembly struggled over the scores of changes suggested by the various countries. At the end of that time, exhausted but happy, with much order produced out of much potential chaos, the meeting ended with the assurance that its work will reveal itself in the character of international events in the season to come.

Although they do not make use of it themselves, the members of the Union granted us the recognition of our statute mile for world's record purposes. This is the one thing we really wanted. The Union adopted it purely as a courtesy to America, the only dissenting voice being that of the French delegate who, for technical reasons, insisted that people engaged in nautical activities should use the nautical mile exclusively.

One of the best results of the meeting was the discarding of all rules for stock runabout racing and the decision to let each country race its runabouts as it sees fit. As you may know, the A. P. B. A. has made revolutionary changes in its runabout rules for 1933. These were submitted to the meeting, along with a hundred or more diametrically opposite changes desired by Italy. In chucking the whole lot of them out the door the Union did a wise thing; Solomon himself could not devise rules for stock runabout racing that would please any 22 people, let alone the boating populations of 22 countries.

There will be no more messes such as centered about the 1931 Harmsworth race in which Kaye Don and Gar Wood were disqualified for beating the gun by seven seconds when the allowance was only five seconds. The Union adopted an inflexible starting rule stipulating that any boat which goes over the line ahead of time must make a restart, without recall, or the taking of her time will be begun only after completion of the first lap.

Italy's proposal which would prevent the allowing of records for trials run on courses below sea level was deferred until next year for further investigation. This proposal is a direct attack on the records made on Salton Sea, California, which is so far below sea level that carburetion is vastly improved and which is so full of salt that, as Racing Commissioner Chapman says, the greatest danger is from floating rocks. European officials tell me that unless speeds made on Salton Sea are barred as world's records, they will get up an expedition to try to match these records on the Dead Sea. Most of us believe that records made on any such bodies of brine put too great a handicap on drivers trying for national or world marks on normal waters.

The situation, therefore, with regard to international motor boating matters is as follows: All the controversy we stirred up between the A. P. B. A. and the Y. A. A. concerning the proper representation of the former in international circles has been ironed out, and there is now a clear understanding of the qualifications and duties of each body. Our statute mile is now recognized throughout the world for official records. Thanks to the work and diplomacy of our two delegates, a feeling of greater friendship and coöperation exists between American racing authorities and those of other countries. A considerable number of important drivers of various types of boats wish to come to our regattas this winter and arrangements are now being made for the staging of events in which they can compete.

At last, peace!

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At the annual organization meeting of the Council of the American Power Boat Association, at the Hotel Lexington, New York, December 5th, officers and committeemen for the coming year were appointed. In addition to thirteen honorary vice-presidents, three newcomers were elected to the active vice-presidential board. They are: Aaron de Roy, Detroit; Lynn Nichols, Palm Beach, Fla.; R. J. Christie, New Smyrna, Fla. The list of those already in office who were reëlected consists of the following: Charles H. Moore, Henry A. Jackson, William A. Rogers, C. Willard Evans, and Morton C. Alexander.

At the annual meeting in October the Council was authorized to enlarge itself by the addition of ten members at large, plus the chairmen of all standing committees. The Council therefore reëlected all its chairmen and added the following boating enthusiasts: William E. John, Edward H. Patterson, Jr., Dr. George Rice, Harvey E. Hauptner, Frederick R. Still, George F. Crouch.

Frederick K. Lord was elected to the Standardizations Committee in place of A. F. Masury. Emmett V. Maun was reëlected executive secretary, and Russell Dimitri Dudgeon was continued in the office of "special ambassador" to welcome distinguished foreign visitors, and a committee appointed to buy him a rubber gardenia. Mr. Maun resigned as chairman of the Membership Committee and Commodore William A. Rogers, of Washington, was appointed to fill his place, with a new committee of his own choice.

New rules for the 220-cubic-inch class were adopted, and President Townsend appointed a committee, consisting of himself, Charles F. Chapman and William F. Crosby, to devise ways and means of holding Florida regattas this winter to offer competition and entertainment to Prince Ruspoli, the Marquis d'Ivenray, Count Rossi de Montelera, the Duke of Spoleto and other prominent European drivers who have expressed a willingness to come over here if suitable races are arranged. Their boats are mostly of the 6- and 12-litre classes, of which we have none, but our Gold Cup boats might be close enough in specifications and speed to qualify.

Leonard H. Thomson, secretary of the A. P. B. A., presented a letter from Commodore Sackrider, of Chicago, asking that the 1933 Gold Cup race be held in that city in connection with the World's Fair. Since the Gold Cup is definitely set for Detroit, presumably on August 5th, through the victory in 1932 of Horace Dodge's *Delphine IV*, it was suggested by the Council that a date one week later might be selected for a race for Gold Cup boats in Chicago and that the National Sweepstakes regatta, at Red Bank, N. J., be held over the Labor Day week-end, usually given over to the Harmsworth race in Detroit. The probability is that there will be no Harmsworth challenge this year.

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I hear two stories about Rolls-Royce's attitude toward the Harmsworth race. One of these, brought to me by a British racing man who is close to such matters and should know what he is talking about, says that Rolls-Royce, as a result of the failure of their engine to function satisfactorily in either heat of the latest race, has definitely retired from motor boat racing and has forbidden all holders of its Schneider Cup engines from engaging in this activity. This, if true, would prevent the

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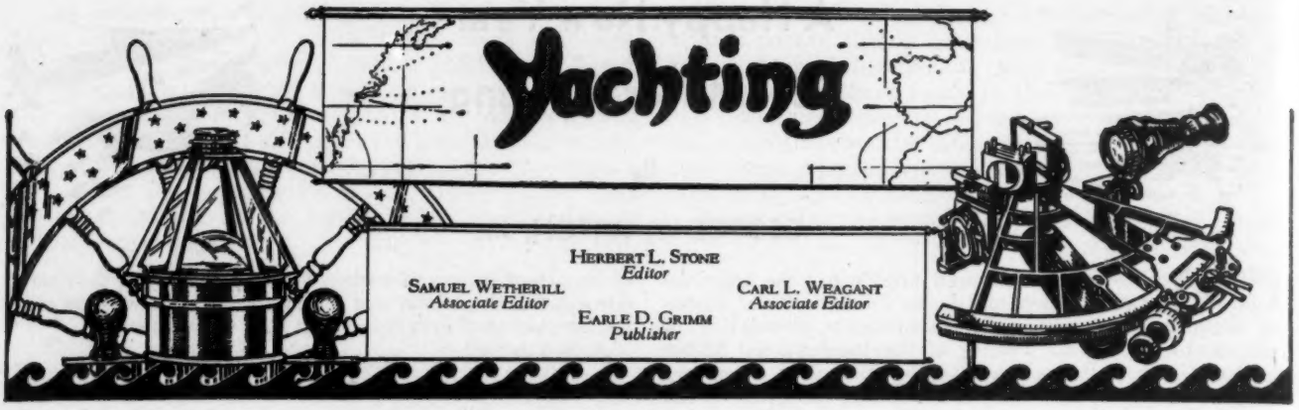

EDITORIAL

Settle the Sailing Dinghy Discussion on the Water

THERE has been so much discussion on the relative merits of the British and North American 14-foot dinghies in the pages of this magazine during the past year that it is about time the claims of the adherents of each type were put to the only conclusive test, actual competition. Figures of speeds mean absolutely nothing in sail boats, as every sailor knows. Conditions, course, strength of wind, sea, and the like, have so much bearing on comparative speeds that the records of boats not sailing against each other cannot be conclusive.

In England and in Canada the 14-foot racing dinghies have been developed to a high state of perfection. It would do a lot for the sport, and for the future of dinghy racing, if the two types could be tried out against each other. An effort is being made to bring about such a meeting this year, and it is hoped that some British dinghy sailor will bring a boat to Toronto to race the best in that stronghold of the American dinghy. We hear, also, that one of the Canadian boats and a well-known skipper may be seen in competition in England before the summer is over. Fine! Now we may find out what's what, and the ink slingers may be confuted.

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An International Eight-Metre Trophy

INTERNATIONAL racing in the smaller yachts is also due for a boost this coming summer by the placing in competition by the Eastern Yacht Club, through Commodore William T. Aldrich, of a new international trophy for eight-metre yachts. This should bring about a foreign challenge this year, if what we hear is true, and Marblehead may witness an invasion of "Eights" from more than one European yacht club. If this is so, it will be a fine thing for the sport. We understand that under the terms of the new trophy any country may challenge, but may be represented by only one yacht.

Any foreign yachts that come over will find plenty of racing north of the Cape, for there is already a fine fleet of "Eights" in the old rock-bound port, and the Ladies' Plate and the Hovey Gold Bowl will be open to foreign competition. That ardent yachtsman, C. H. W. Foster, has just returned from abroad and he has brought with him the Fife-designed "Eight," *Decima*, for racing at Marblehead, and we hope he has some assurance of foreign support this year for the new trophy.

Show Time

IT IS gratifying to record that the topsy-turvy economic situation, colloquially known as the depression, has not, apparently, dampened the enthusiasm for the Motor Boat Show, judging from advance information concerning the list of exhibitors. This annual exhibition of the product of the pleasure boat and marine engine industry has, in its twenty-eight years, become an important part of the year's yachting activity, and coming as it does in midwinter, acts as a stimulus to those interested in the sport as well as to those whose business it is to fulfill the many needs of the boat owner. It would be a real loss to the yachtsman and the public at large if a year were allowed to roll around without this Motor Boat Show — and particularly so at a time when the sport and the industry need all the stimulus they can get. From what we hear the exhibition this year will fill three floors of the Grand Central Palace, and will be as comprehensive as any previous Show.

As the dates for the Show are January 20th to 28th, inclusive, the February issue of YACHTING will be the annual Motor Boat Show number. In it will be found a complete description of the exhibits to be found at the Palace — cruisers, runabouts, outboards, sail boats, engines and equipment. In order to coincide with the Show itself, publication date for this issue will be advanced to January 20th.

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New Class for Sound Assured

WITH the launching at City Island of the first of a proposed new small one-design class late in November, the prospects are bright for the successful promotion of a class for Long Island Sound next summer. We understand that several orders for other boats are about to be placed, and a class of eight or ten boats is a possibility. For times such as these this is quite an achievement. The boats are from the board of Sparkman and Stephens, and are 34½ feet long overall, of light displacement and moderate sail area.

In spite of the hard times, other localities would do well to agitate for new racing classes of small boats. For not in many years has it been possible to get as favorable prices as now, or could "more boat for the money" be had. And the sport needs new classes now.

IN THE WORLD OF YACHTING

W. C. Sawyer

COMMODORE ALBERT SOILAND

THIS month we turn to the Pacific Coast to pay tribute to the indefatigable work on behalf of the sport of yachting by Dr. Albert Soiland, of Los Angeles. As commodore of the Transpacific Yacht Club, Dr. Soiland biennially develops enthusiasm among western windjammers for the 2180-mile jaunt to Honolulu. Thrice he has participated in this classic, first in 1923 with his schooner "Viking IV," a second time on the record-holding "Mariner" in 1926, and again in 1930, aboard "Contender."

Commodore Soiland's efforts in behalf of yachting on the West Coast include active participation in the work of many organizations. His first official post dates back to 1914 as organizer and as first commodore of the Newport Harbor Yacht Club, an office which he is filling again this year. In 1915 he was elected commodore of the venerable South Coast Yacht Club. Largely through his efforts in 1921 there was organized the Southern California Yachting Association, which he served as commodore during its first two years. Later, he effected the organization of the Pacific Coast Yachting Association and served as its head in 1923. In addition to the local offices he has held, Commodore Soiland has served on the Executive Committee of the North American Yacht Racing Union.

Craft flying Commodore Soiland's house flag include the historic "Vasco de Gama," and "Vikings I, II, III and IV," the latter a 54-foot auxiliary schooner. He founded the Snowbird fleet of his home club by liberally donating boats to the junior members, and he was instrumental in establishing the Six-Metre Class on the Coast by helping to organize the syndicate which brought "Synnove" to his home port.

Under the Lee of the Longboat

by Cap Stan

A MONTH ago certain predictions were made on this page regarding the developments in the Twelve-Metre Class. Alas! The whole situation seems to have changed, and things are very much in the air. Norway wants us to come over there and race next summer, and we don't want to go. We want Norway, and other foreign countries, to come over here — and they don't want to come. When some final decision is made one way or another, maybe we'll have some further comment to make — we're through guessing and supposing on this subject for the time being.

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It strikes me as a bit funny that even a few people have been wondering if there would be a Motor Boat Show this year. Why not? We've had depressions before — and the Show went on just the same. Of course, no normal person would expect the coming Show to be as large and crowded as in the halcyon days of 1929 and 1930. But it'll be a good Show just the same, with emphasis on practical boats, motors and gadgets, rather then some of the flossy and more or less foolish stuff which has adorned the booths in the late past. And prices! Have a look, and just see what your dollar will buy in 1933. The opening is set for January 20th. Don't miss it.

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What a lot of noise is being made about sailing dinghies these days! The Frostbiters are making and breaking rules every day, and occupying considerable space in the daily press of more than one large city. Then the adherents of the Canadian 14-footers are having a grand argument with the Britishers as to the desirability and speed of the types in favor on different sides of the Atlantic. When the smoke of battle has subsided, it's dollars to doughnuts that each side will cling to its own type, no matter how the other side views their choice. Any good argument keeps the pot boiling during the long winter months. On with the dance!

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The single-handlers are hard at it again. We have already mentioned Alain Gerbault's departure in the November issue. Then Harry Pidgeon set sail from Panama, and arrived safe and sound in Los Angeles on December 5th. And Captain Thomas Drake, who lost his last three craft, has built a fourth, *Progress*, sailed from Seattle to Santa Barbara, and shoved off again for Honolulu. The economic situation doesn't seem to worry these wanderers. Rather, it seems to spur them on. If the latter is the case, don't be surprised if other adventurers follow in their wake.

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Maybe you're fed up on the average run of tales of the sea, of which there have been a lot published in recent years. If so, and you still hanker for a bit of really interesting nautical reading, try *The Mutiny on the Bounty*. It was reviewed in our last issue, and I can only go a bit further than that review and say that it is an amazing tale, cunningly contrived from authentic facts about one of the most famous mutinies in history — the kind of a book which is of compelling interest from cover to cover. It's well worth a place on anybody's nautical bookshelf.

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The Gibson Island Race is definitely on, the tentative date is June 24th, and they'll probably start again from Sarah's Ledge, off New London. No official announcement has been made about measurement rules, conditions, and so on. Will there be any restrictions on sails? On parachute spinnakers? On Genoa jibs? How about it, Gibson Island? Don't delay your announcements too long; prospective entrants want to know *now* just what to prepare for. Shoot the works, pronto, and you'll do a lot towards assuring a large entry list and a successful race.

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Don't be surprised if two American yachts should journey across the pond early next summer and take a crack at the Fastnet Race. Can't tell you any more at present, except that one is a schooner and the other a yawl. It certainly would be a fine move, particularly as we had two British entries in last year's Bermuda Race. Here's hoping they both go, and good luck to them.

Make Way for the Racing Cruiser

By H. S. SAYERS

WHAT racing boats and racing sails are too expensive for present conditions was the gist of a discussion which developed at the last meeting of the Yacht Racing Association of Long Island Sound. The argument started when attention was called to the rapid increase in the use, by those who could afford them, of huge "parachute" spinnakers. As there is practically no limit to the size of such sails except the height of the mast and the ability of a trained or professional crew to handle them, they are bringing into the sport one more element that makes keen competition by the man of average means out of the question. Such sails, of course, are perfectly legitimate under the rules, as are also the large and expensive Genoa jibs which add so much to the pleasure and success of those who can afford them. Only the adoption of a proper rule can restore the balance between sport and pocketbook.

But there was another aspect of the situation which came under discussion — the drawing out, to almost an absurd length, of the modern racing boat and the attenuation of breadth of beam. Does it not seem ridiculous that in the Six-Metre Class, adopted here some years ago with the idea of getting a class of boats that would be more seaworthy and that would have more body room than is found in our own small Universal Rule boats, developments have reached a point where the champion boat must be only six feet wide and nearly forty feet long?

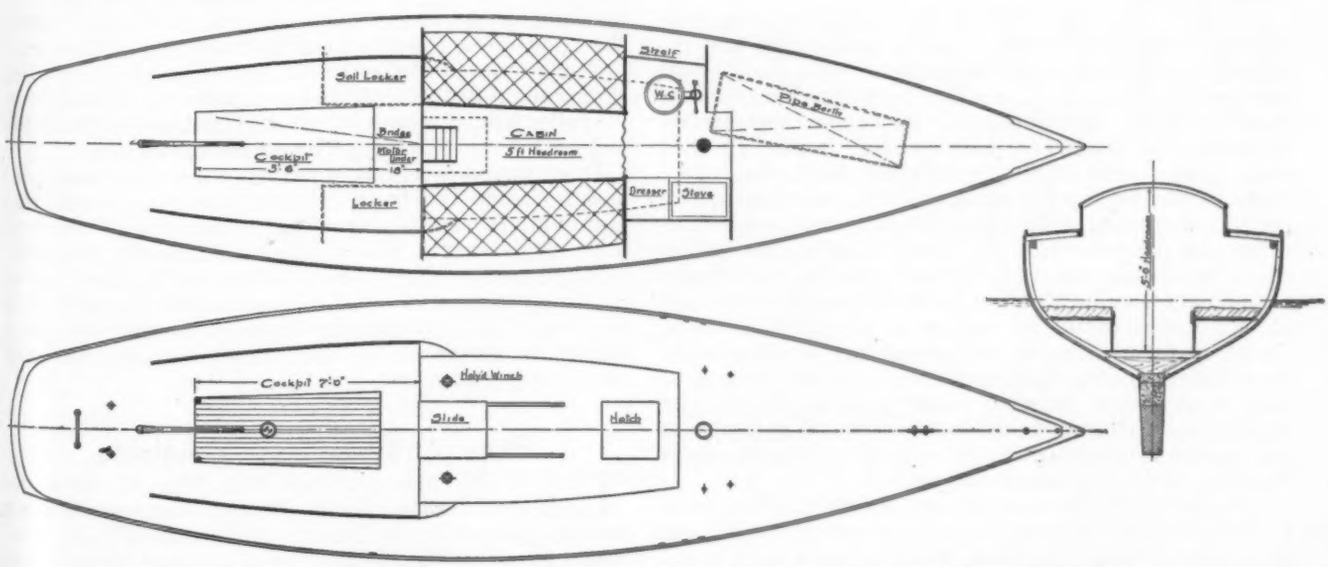
The relation between the increase in the untaxed head sails and the increase in length was pointed out very clearly by Mr. Clinton H. Crane. By drawing in the headstay and by diminishing the mainsail, the taxed sail area is decreased and the saving can be added to length. Then a great overlapping jib puts back all the lost area, with much more added, so that the boat which is supposed to carry 500 feet of sail has 700 — and probably in more efficient form.

All of this adds to the expense of yachting. And it adds doubly to the expense; for not only does it produce a boat that is super-refined, super-developed and expensive in itself, but it produces a boat that goes on the beach and stays there when another, more refined, more highly developed, and more expensive yacht comes along. As a racer, such a boat is superb; as a cruiser, she is useless.

These remarks apply to rule boats, but in a great measure they apply also to the latest one-design boats. I maintain that these ultra-modern slivers, two long ends with a chunk of lead in the middle, with no accommodations and offering no possibility of installing an engine when racing days are over, are expensive at, say, $2,500, whereas a sensible, fast cruising boat, with its manifold uses and a ready market for many years, would be cheap at $5,000.

The old length-and-sail-area rule produced good boats for both racing and cruising. But, gradually, this rule developed the flat, scow type, with long overhangs — fast as the dickens, but otherwise useless and expensive. So our Universal Rule was formulated to cure this evil. And now we see the rule that was meant to curb the excess to which we had gone working towards the opposite extreme, with a long boat and no beam to speak of. To get more waterline when heeled, the ends are pulled out to long, low overhangs — so long that they project beyond the points where the forestay and the backstay lead. Good for racing, but bad for the pocketbook! And it is not only our own rule, but the International Rule, as well, which is now tending in that direction. Just as the scow had to be eliminated, so now we must eliminate the sliver.

What is the remedy? Perhaps there is none, and



Cabin plan, deck plan and 'midship section of proposed auxiliary racing class, prepared by C. D. Mower. On a length of 33½ feet real accommodations for a short cruise are provided

perhaps racing boats will have to be allowed to follow their own lines of development, which seem to be leading nowhere at all, so far as the smaller Universal Rule boats are concerned. None are being built; and it is significant that on the last New York Yacht Club cruise, the cruising boats, for the most part built to no rule at all, were the big feature.

I do not believe that any new boats will be built for a long time to come under either measurement rule, except for international racing. And we shall have to continue to depend on a few wealthy men to defend the various challenge cups with boats built to the extreme of the rule, and left on the beaches when the races are over. As far as the average man is concerned, he will have to rely on small one-design classes, as at present, with restrictions on sails, number of haul-outs a season, etc., to keep down the expense, and on auxiliary cruising boats built to no rule, but sailing on handicap.

So why not acknowledge this situation and make up an entirely new set of rules for auxiliary racers? As a matter of fact, without any special rules or guidance, they are forcing themselves to the front everywhere except in the Saturday afternoon regattas. In the overnight races, and in the long distance races and cruises, the miscellaneous cruisers are capturing the interest of all the racing men except those who still like the Saturday afternoon "merry-go-round" in small one-designs. Moreover, the owner of the strictly racing boat must either have a power tender to get his boat to and from the starting line when this is at any distance from his home port, or else be able to avail himself of a tow by a friend. This adds to the expense of yachting — and is a bother as well.

I believe that the time is ripe for developing new classes of auxiliary racers. I think that, in the first instance, we shall have to be satisfied with some small one-design class; or, if a duly authorized committee would work out close limitations for a class, then various designers and builders could try their hands. In that case, there would be very good sport for a number of years in developing the class, and the boats would be useful for cruising when they did not prove winners as racers. In the meantime the Yacht Racing Association could be working out measurement rules for new classes of auxiliary racers. Manifestly, the latest developments of rule boats would be useless as auxiliary cruisers; therefore, for each racing rule class there would have to be a corresponding auxiliary class with limitations to force it to a type suitable to carry an engine; or else entirely new classes would have to be made up with measurement rules to fit a type of boat suitable for short cruising, and with a small engine.

It could hardly be expected that a rule good for ocean racing would be the best type for afternoon racing and overnight cruising; therefore, it would have to be a racing rule primarily, *i.e.*, one that would produce more of a racer than a cruiser, but yet be a cruiser with power. This difference would, of course, be more marked in the smaller classes, for in the larger classes the racing boats seem to take to power quite kindly. Witness the fine old racing schooners of former years, nearly all of which have power, but which now have no class for racing.

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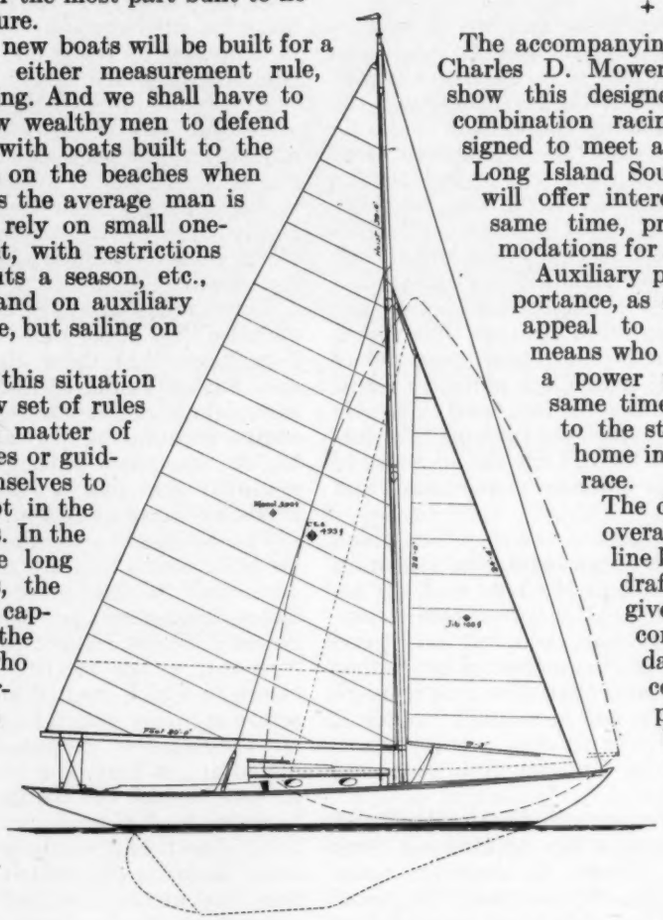

Sail plan of proposed auxiliary racer

The accompanying plans from the board of Charles D. Mower have been prepared to show this designer's idea of a one-design combination racing and cruising boat designed to meet a very definite demand on Long Island Sound for a small boat that will offer interesting racing and, at the same time, provide reasonable accommodations for short cruises.

Auxiliary power is of the utmost importance, as such a boat is intended to appeal to the owner of moderate means who must avoid the expense of a power tender, but who, at the same time, must be sure of getting to the starting line and of getting home in reasonable time after the race.

The dimensions selected are an overall length of 33′ 6″; waterline length, 23′ 3″; beam, 8′ 0″; draft, 5′ 0″. These dimensions give a boat large enough to be comfortable for racing and day sailing, and provide accommodations for three people. The size has, of course, been kept as small as possible, with the question of construction costs kept in mind. The details of construction are designed to cut out as much unnecessary expense as possible.

The cabin has five feet headroom, with two transoms which serve as berths; a toilet and a small galley with stove, ice box and dresser. A pipe berth is provided in the bow. There is a large sail locker under the bridge deck and also a sizable locker for clothes, etc.

The motor is installed under the bridge deck with the shaft run off-center to clear the deadwood. A feathering propeller will, of course, be used so that sailing qualities will not be sacrificed to any appreciable degree.

In comparison with some of the other proposed one-design classes, this boat, on about the same length, has approximately a foot more of beam and about 50 per cent more displacement. The greater displacement, increased cabin accommodations and auxiliary motor installation naturally increase the cost over the boats of smaller displacement without cruising accommodations, but for a slightly larger initial investment a much greater range of usefulness is obtained.

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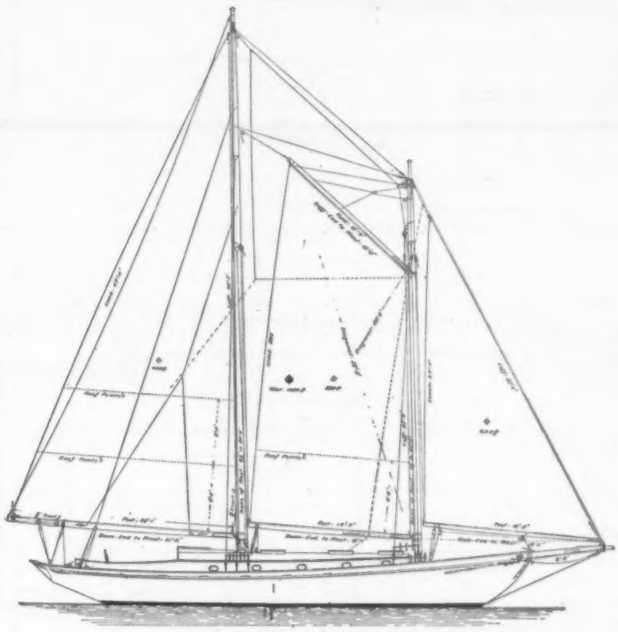
Plans of 16-Foot Sloop Available

THROUGH arrangement with Mr. C. Lowndes Johnson, designer of the 16-foot centerboard sloop which appeared in the March, 1932, issue of YACHTING, under the name "Little Brother of the Star," blue prints showing lines and construction plans are now available through YACHTING. The price of these is $2.50.

Alden's Latest Auxiliary Schooner

SOME few years ago John G. Alden, sensing the demand for a small auxiliary schooner of moderate draft, turned out a 43-foot overall craft which was distinctly successful. Over twenty of them were built, and proved to be roomy, able, smart-sailing craft, with a fine turn of speed under power. The accompanying plans show the latest development of this type of cruiser, one of which has already been built and tried out, her performance being even more satisfactory than that of her predecessors. The dimensions are as follows: l.o.a. 45′; l.w.l. 33′11″; beam, 12′6″; draft, 4′3″; sail area, 1032 sq. ft.

The general characteristics of the new model are the same as those of the older craft, and show a boat of handsome appearance, good sheer and freeboard, ample beam and nicely proportioned ends. The 8200-pound keel insures a non-capsizable boat, and there is 3000 pounds additional inside trimming ballast.

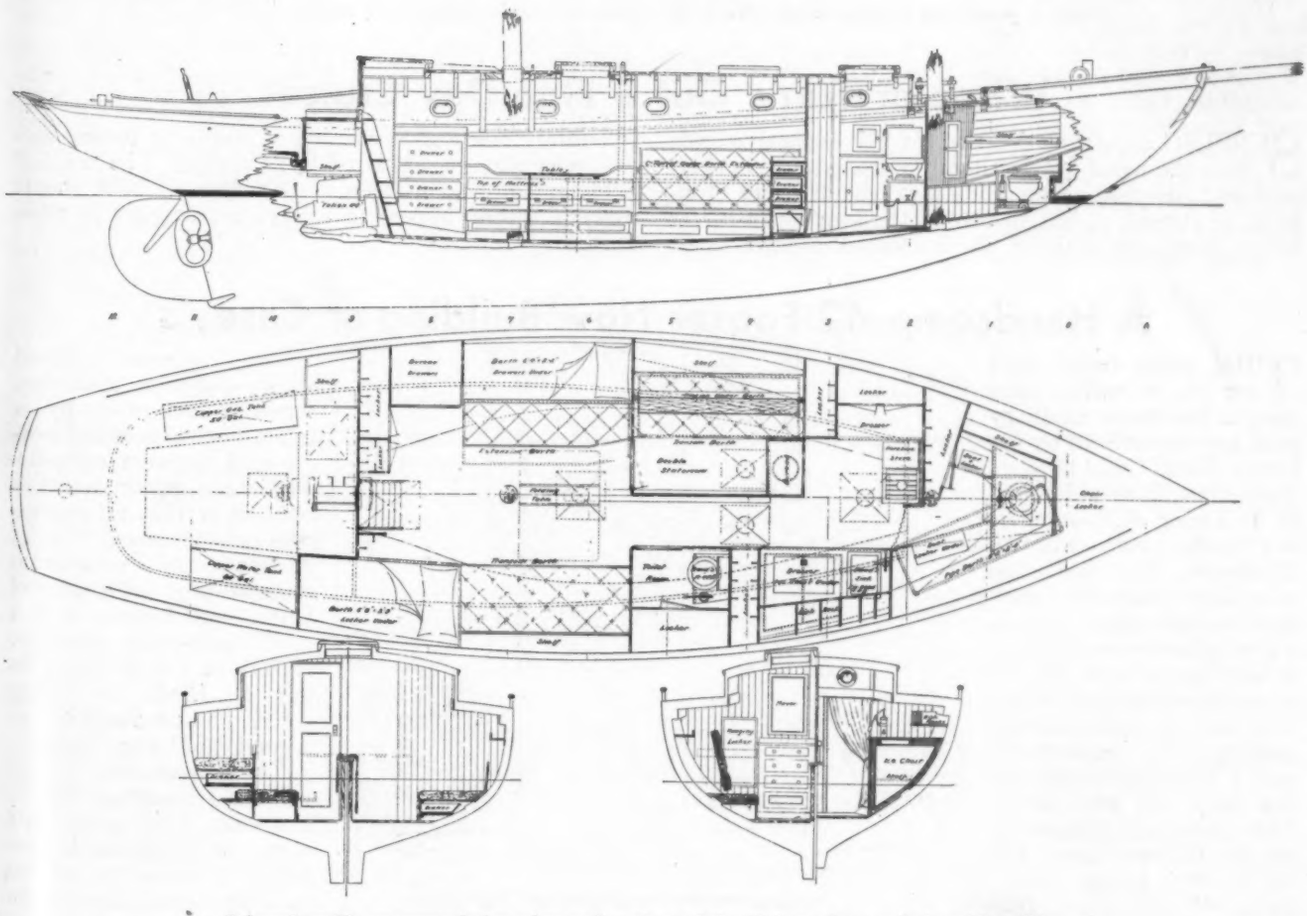


Sail plan of the 45-foot Alden-designed schooner

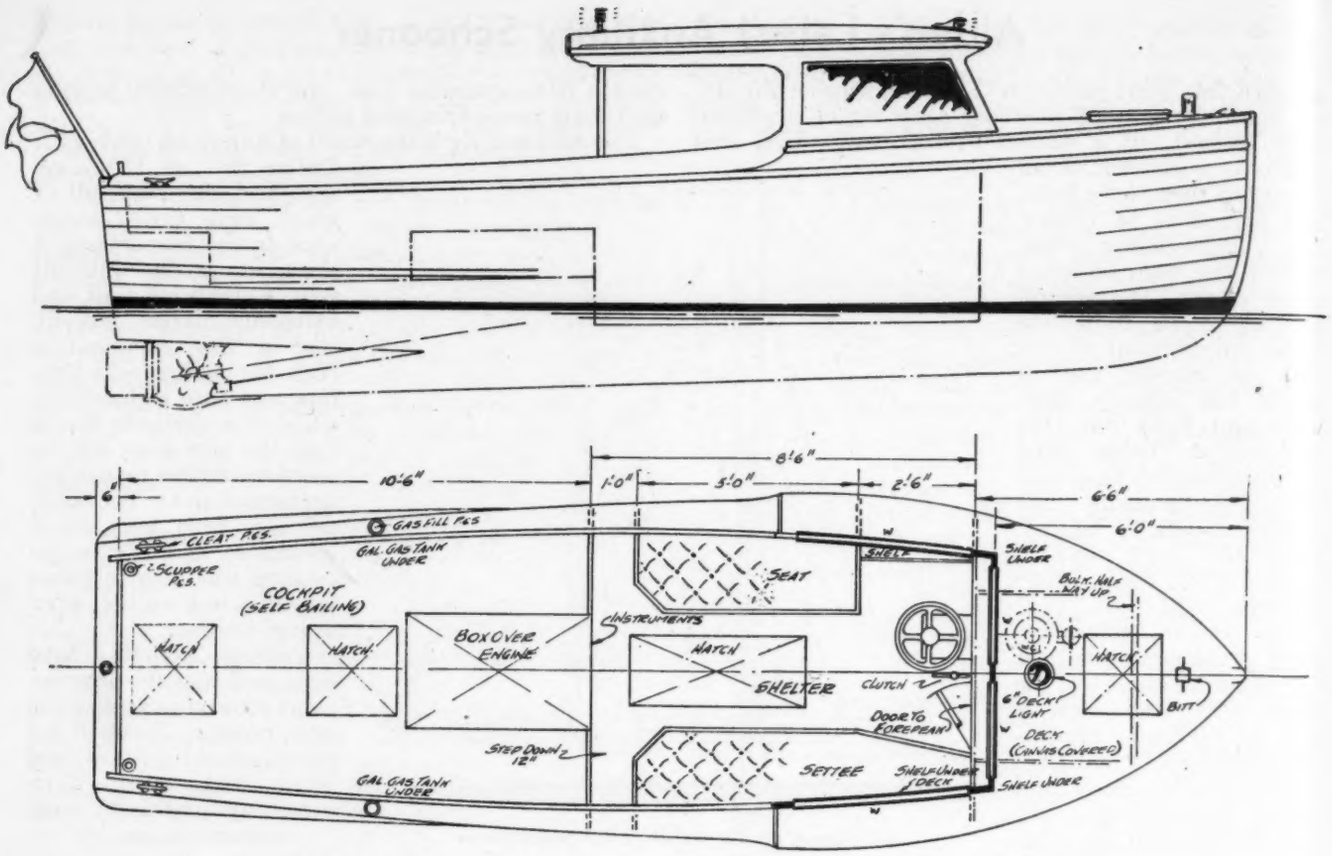
The schooner rig is the result of numerous trials with similar rigs on the same type and size boat, all of which have varied somewhat in the proportions of the areas in the different sails. A single headsail, and unusually large foresail, give a fine combination both for sailing effectiveness and ease of handling, while the designer states that the new craft will do anything within reason under foresail alone. The mainsail has been kept small enough so that it gives no concern whatever in either hoisting or lowering, even in bad weather.

Various layouts have been used, but the arrangement shown has proved the most popular. Forward is a good forecastle for a paid hand, with toilet. Then comes an unusually large

(*Continued on page 86*)



Inboard profile, accommodation plan and sections of the 45-foot schooner designed by Alden



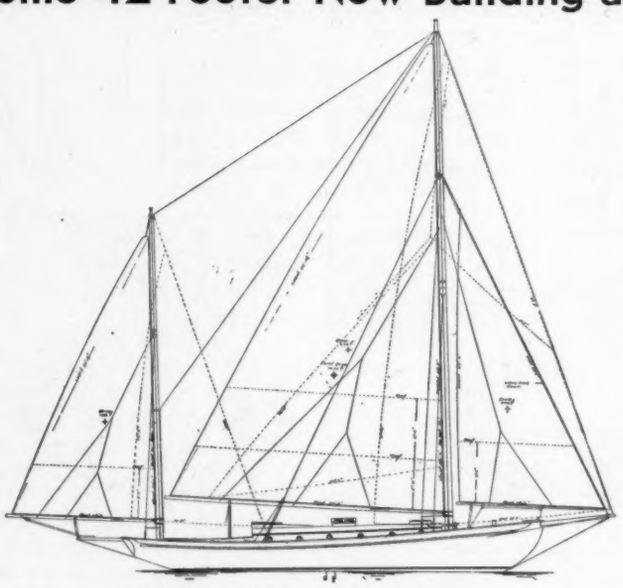
Outboard profile and accommodation plan of the 26-foot day cruiser designed and built by Wheeler

Wheeler Turns Out a Fine Day Cruiser

SENSING a growing demand for less expensive craft than the usual type of highly polished cruiser with topheavy sleeping accommodations, the Wheeler Shipyard, of Brooklyn, has sponsored the snappy 26-footer whose plans appear above. She is a fine all-weather boat, splendidly adapted to afternoon jaunts or fishing parties, with shelter cabin and large cockpit. The low cost of operation and upkeep of this type of boat should make a strong appeal to many, particularly in these uncertain times.

A Handsome 42-Footer Now Building at Casey's

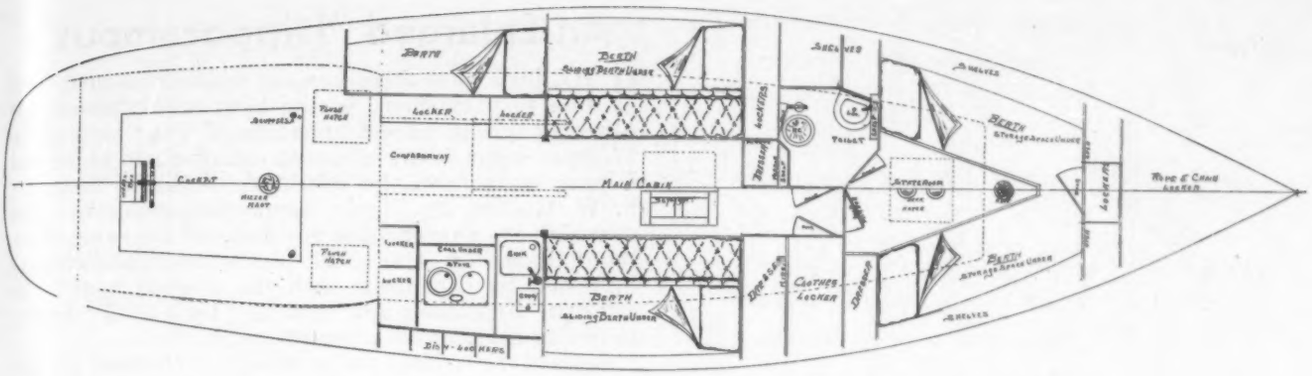
THE plans below and on the following page show a handsome auxiliary yawl now being built by the Casey Boat Building Co., Fairhaven, Mass., for Dr. H. B. Loder, of Boston. As her home port will be Plymouth, the draft has been kept down to 4 feet, with centerboard trunk entirely below the cabin floor. A lead keel of 8000 lbs. assures the stability of a keel boat, and she should be decidedly able, comfortable, and a good performer under both sail and power. The principal dimensions are as follows: l.o.a. 42′; l.w.l. 33′; beam, 12′6″; draft, 4′; sail area, 1035 square feet.



Sail plan of the new 42-foot Casey yawl

The interior layout shows a double stateroom forward, followed by a toilet room to port and lockers and dressers opposite. The main saloon has two built-in berths and two extension transom berths. Abreast the companion steps to port are a quarter berth and lockers and a good galley is opposite. A Scripps F-4 motor, driving a Hyde feathering wheel, should drive her at a good 8 miles an hour.

The construction is rugged, and materials are of the best. First grade, rift sawn fir planking is fastened to white oak frames with best grade boat nails. Exterior joiner work is teak.



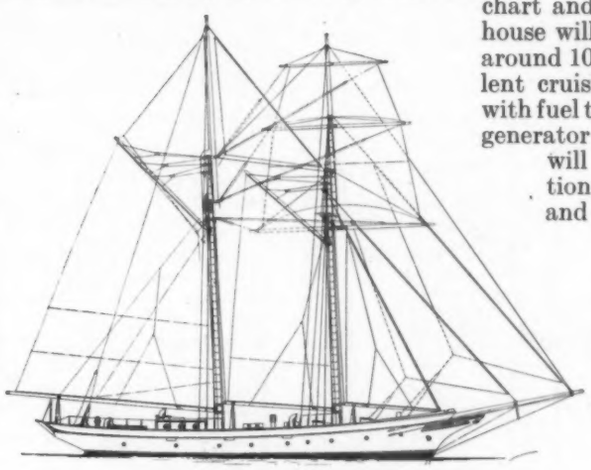
Accommodation plan of the 42-foot Casey-designed centerboard yawl, described on preceding page

A Square Topsail Schooner for Ocean Cruising

WITH a growing number of yachtsmen becoming interested in lengthy ocean cruising, the accompanying plan of a square topsail schooner should be of considerable interest. She is from the board of Ralph E. Winslow, of Quincy, Massachusetts, and is of the following dimensions: l.o.a. 87′ 3″; l.w.l. 71′; beam, 21′; draft, 11′; sail area, 4300 sq. ft.

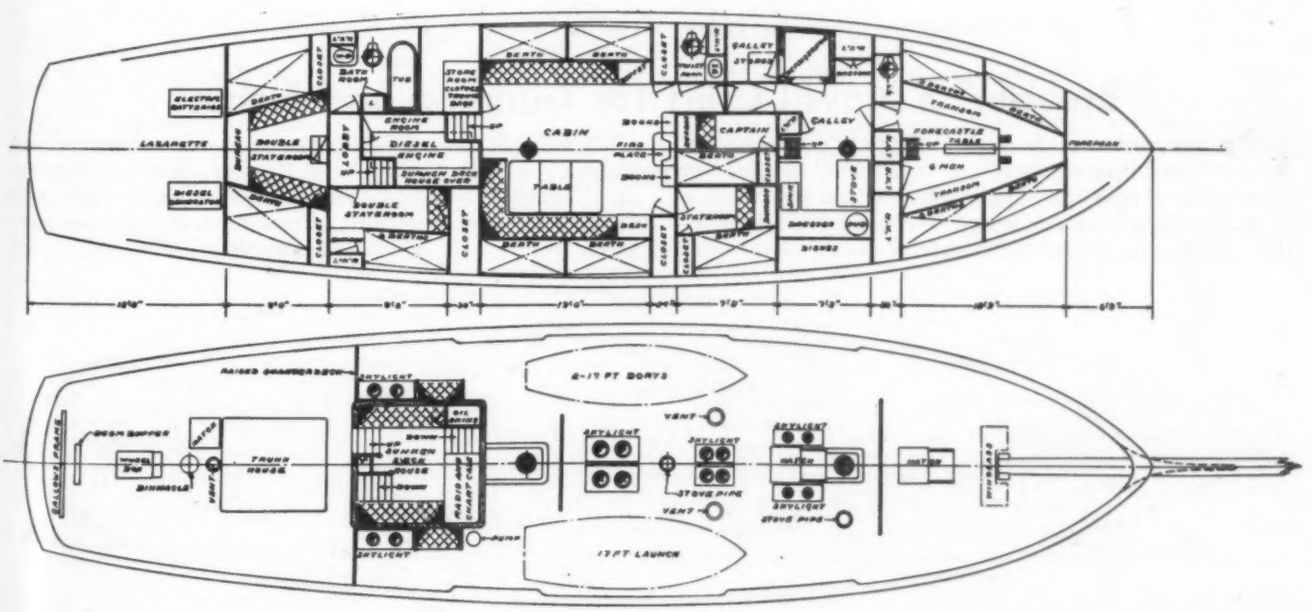
The hull is shippy-looking and seagoing, with ample beam and draft, and approaches the commercial type rather than the yacht type. The rig was adopted because of its decided efficiency both on the wind and off the wind on long runs in the trades.

The sunken deckhouse is an excellent feature, as it will greatly increase the pleasure of cruising in bad weather, and makes a fine observation room, vestibule to keep wet out of the living quarters below, and a fine chart and radio room. Below this deckhouse will be installed a Diesel motor of around 100 h.p., which will give an excellent cruising range under power alone, with fuel tankage of 1000 gallons. A Diesel generator and large storage batteries will take care of lighting, refrigeration, ventilation system, pumps, and other auxiliary equipment.



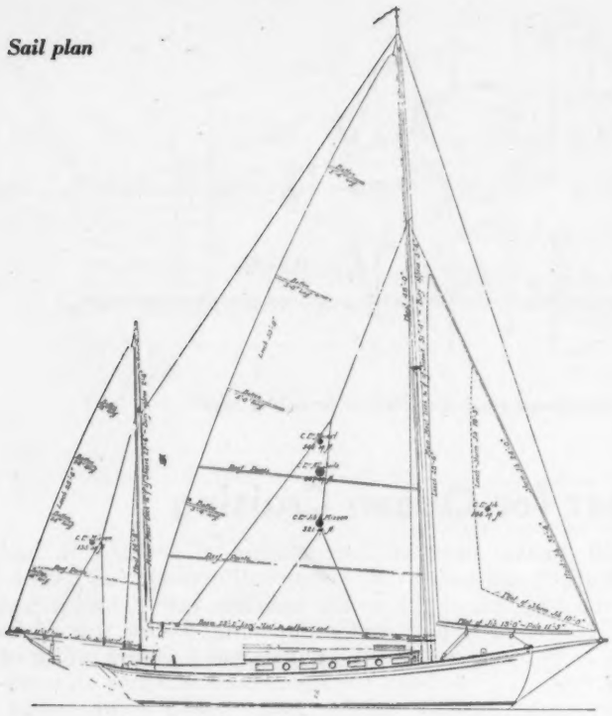
Sail plan of the 87-foot topsail schooner

Excellent accommodations for both owner and crew are found below decks, and include two double staterooms, a single stateroom, big main cabin with four berths, and a captain's stateroom forward. The forecastle is ample for a crew of four to six, and the galley and storeroom are unusually large.



Accommodation and deck plans of the topsail schooner designed by Ralph E. Winslow

Sail plan

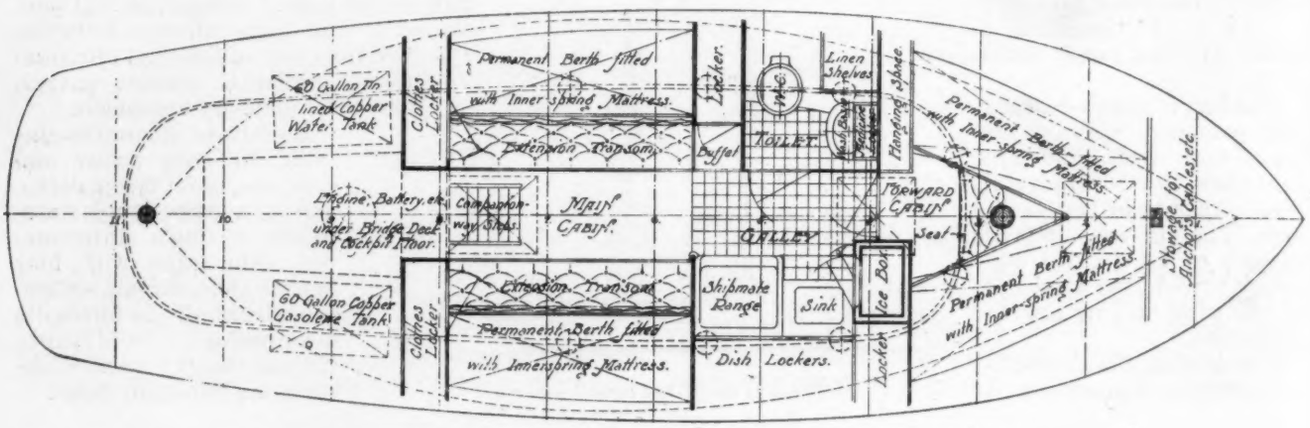


An Enlarged "Hippocampus"

THE little yawl *Hippocampus* needs little introduction to yachtsmen, having been made famous by Alfred Loomis in his well known book, *The Cruise of the "Hippocampus."* Now comes an enlarged and improved *Hippocampus* from the board of the same designer, F. W. Goeller, Jr. Bigger, handsomer, roomier, more powerful, the new creation has many of the same characteristics as her older sister, plus a few improvements suggested by experience with the original boat. The principal dimensions are: l.o.a. 36′; l.w.l. 30′2″; beam, 11′6″; draft, 5′9″; sail area, 867 sq. ft.

Some of the striking characteristics of the boat are the pleasing sheer with its bold spring, full deck line and wide stern, and beautiful wineglass sections, typical of all of Goeller's designs. She has rather full garboards, good deadrise, straight floor, and high, beautifully-turned bilges which, with the generous beam, assure good initial stability, yet an easy form in a seaway. The waterline is a bit hollow forward, with flaring sections, assuring dryness. The quarters are high, and there is no heavy transom to drag when the boat is heeled.

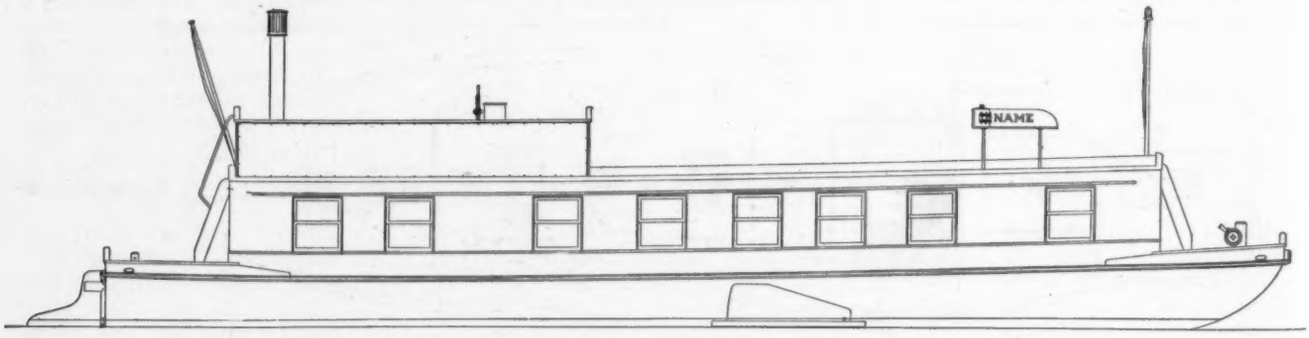
Six people are easily accommodated in two cabins, while there is an excellent galley and toilet room and plenty of lockers and stowage space. A 24 h.p. Red Wing motor should drive her a good 7 miles an hour.



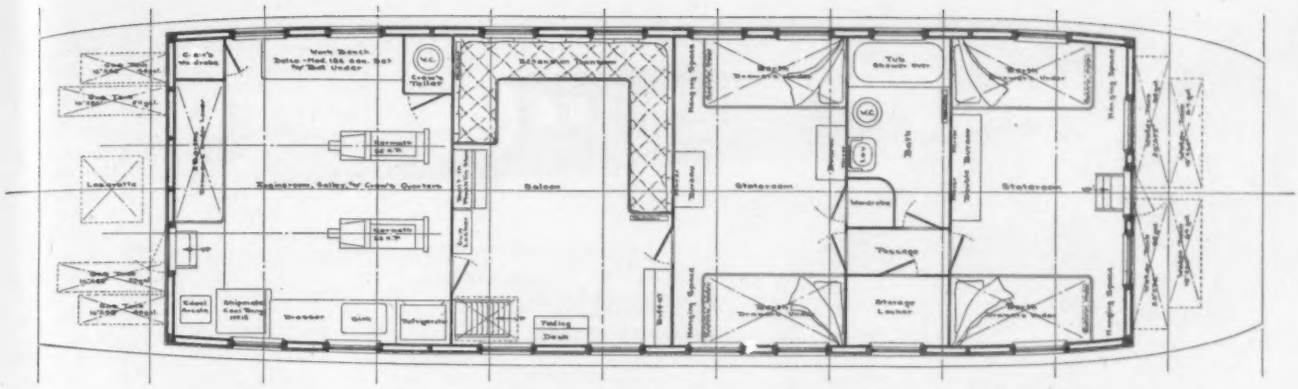
Accommodation plan of handsome 36-foot cruising yawl designed by Fred W. Goeller, Jr.

"Bicoba," a Novel Craft for Gunning and Fishing

THE interesting craft whose plans are shown on this and the following page are of *Bicoba*, designed by Thomas D. Bowes for Messrs. Biddle and Coleman, of Philadelphia, who have found her ideally adapted for comfortable hunting and fishing trips in the shoal waters of Barnegat Bay, Chesapeake Bay and other inland waters. Along the Jersey coast this type of boat is known as a "garvey," and is quite popular with hunters and fishermen. The principal dimensions of *Bicoba* are: l.o.a. 56′; l.w.l. 51′8″; beam, 16′; draft, 1′6″.



Outboard profile of "Bicoba," the garvey-type hunting and fishing craft designed by Thomas D. Bowes



The spacious cabin plan of "Bicoba," designed by T. D. Bowes and owned by Messrs. Biddle and Coleman

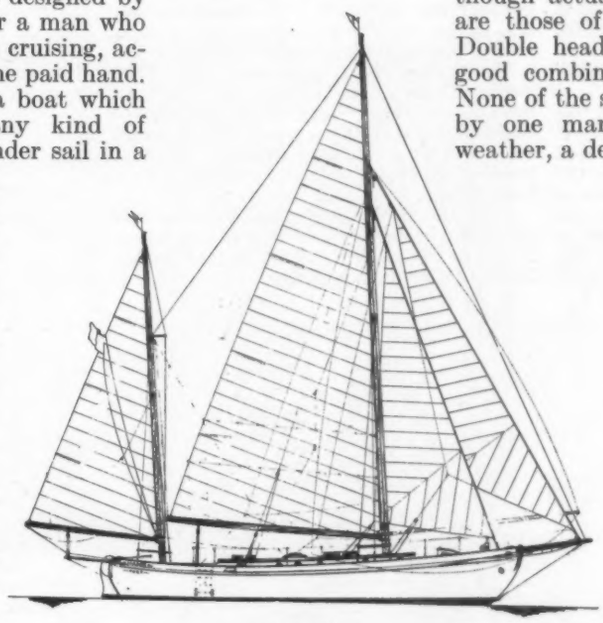
With her twin 35 h.p. Kermath motors, *Bicoba* makes a good 8 miles an hour, and with her leeboards working, handles well in hard winds and choppy waters, having made trips up and down Chesapeake Bay when the going was quite lumpy. The cabin plan shows a spacious and comfortable layout for four to six people, with big bathroom and galley, and with unusual stowage space for all kinds of sportsman's gear.

A Double-Ended Ketch for Offshore Cruising

WITH blue water cruising becoming more and more popular every day, the accompanying plans of a rugged double-ended ketch are sure to be of great interest to yachtsmen who want to go places regardless of weather conditions. She was designed by Megargel & Gruber, Inc., for a man who contemplates some extended cruising, accompanied by his wife and one paid hand. The requirements were for a boat which would be seaworthy in any kind of weather, with good speed under sail in a good breeze, and which could be handled by one man on deck. In addition, there must be comfortable living quarters for the owner and his wife, as well as a complete forecastle for the paid hand. The dimensions are: l.o.a. 42′; l.w.l. 37′; beam, 11′; draft, 6′ 3″; sail area, 1050 sq. ft.

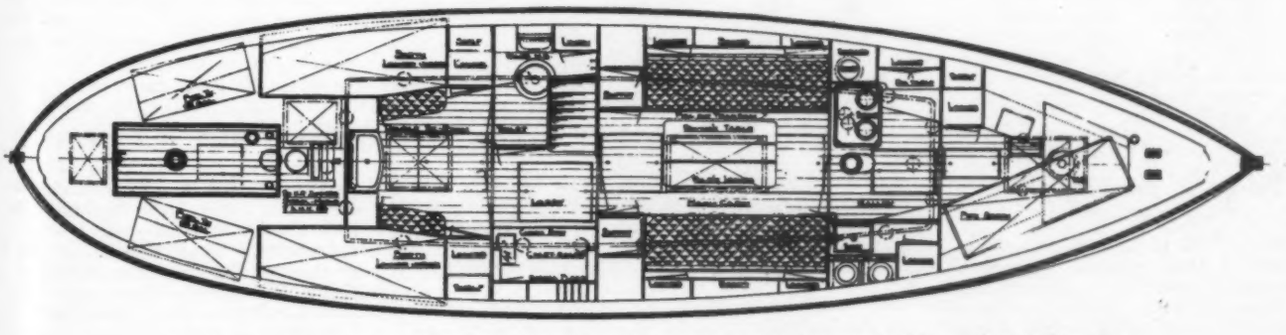
Her hull is strongly reminiscent of the Colin Archer type of Scandinavian double-ender, famous for its sea-keeping qualities. The beam is moderate for this type of boat, promising an easily-driven hull in rough going. With good freeboard, short ends and flaring bow sections, she should be dry in hard going and keep her decks dry in all but the worst weather.

Technically, she is rigged as a jib-headed ketch, though actually the proportions of the rig are those of a yawl with a large mizzen. Double head rig is used to assure several good combinations of sail without reefing. None of the sails are too large to be handled by one man in anything but very bad weather, a desirable feature in cruising.

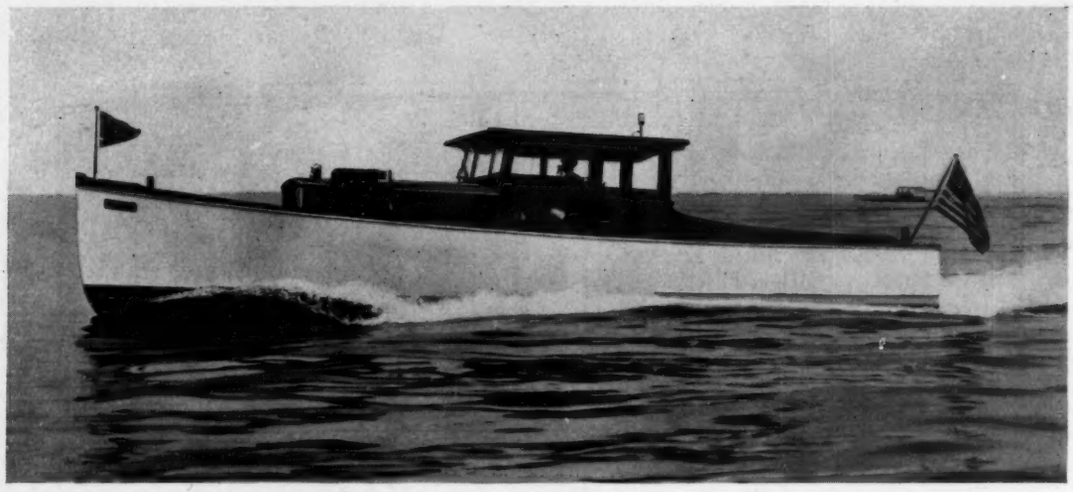


Sail plan

The accommodation plan is laid out for a good forecastle for the paid hand, with pipe berth, toilet, and ample locker and stowage space. Next comes a well-arranged galley, good sized main saloon, and lobby with chart table to starboard and toilet room opposite. Abaft the lobby is a fine double stateroom with bureau and two large hanging lockers. The motor compartment, separated from the stateroom by a watertight bulkhead, houses a 2-cylinder, 20 h.p. Junkers Diesel, a motor with little or no vibration.



Interior arrangement plan of the 42-foot double-ended seagoing ketch designed by Megargel & Gruber, Inc.



The new Matthews 38-foot Utility cruiser on her trial run. With a Kermath-Farr 80 h.p. motor she does 10 to 11 m.p.h.

Of Interest to the Skipper

New Matthews Utility Boat

THE Matthews Company, Port Clinton, has announced the addition of a new "38" Utility to their present line of stock cruisers. This new craft is adaptable to a number of widely varied uses, such as fishing, cruising, passenger work, ferry service, yacht tender, or in connection with a summer cottage. Since the Matthews production plan includes only two different basic hulls, the "38" and "46," this new model is embodied in the same hull as all other "38" models.

Through a selection equipment plan, this boat may be fitted out with additional accommodations for any one of a dozen different purposes. This plan enables the purchaser to buy as much or as little boat as he wants and also incorporate just the features he desires. One of the advantages of the plan is that the owner can install additional interior equipment himself or have his local builder carry out his ideas.

The boat itself, at the lowest price in Matthews history, $3990, is by no means incomplete as it stands. The interior layout consists of a large forward cabin with two wide berths, a toilet room with standard toilet, galley with large sink and workshelf, and a roomy open cockpit nearly 17 feet long. The short canopy is of permanent construction with heavy plate glass windshield.

For power, the rubber mounted Kermath-Farr 6-80 provides a top speed of 10 to 11 miles per hour with very economical gas consumption. This speed can be maintained all day long because the high speed engine is performing medium duty work in this installation. Tank capacities are 125 gallons of fuel and 50 gallons of water, which give a wide cruising radius. Additional power installations, giving speeds as high as 35 miles per hour, can be made.

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Sales Manager for Kermath Appointed

Fred C. Morgan, President of the Kermath Manufacturing Company, Detroit, announces the appointment of Henry P. Hellmuth as Sales Manager for Kermath in charge of all marine engine sales.

Mr. Hellmuth has been identified with the marine industry for the past 25 years. He has served in a sales capacity with several marine engine manufacturers and only just resigned as sales manager of the Hacker Boat Company to take on his new duties with Kermath. His past marine engine experience will be of great value in the new post, and his intimate knowledge of the boatbuilding industry — its manufacturing and selling problems — will enable him to render boatbuilders a distinctive service.

No changes are contemplated in Kermath's liberal sales policy of rendering boat owners the utmost possible service. Boatbuilders will still be provided the maximum coöperation and engineering help in meeting existing problems of engine selection and boat selling.

The same dealer policy which has been so successful in making Kermath an important leader in the marine engine field will be adhered to without any change.

"Grenadier," a smart auxiliary which finished second in the last Bermuda Race. Her auxiliary power consists of a 4-cylinder Scripps

Scripps Motor Co. Appoint Chicago Distributor

The Scripps Motor Company, pioneer manufacturers of marine engines, announce the appointment of the Marine Supply and Engine Company, 565 W. Washington Blvd., Chicago, as distributors of Scripps engines in this district. The Marine Supply and Engine Company is a division of the Chicago Water Transit Company. The active management will be under the direction of A. H. MacGregor, who has had extensive experience in the marine field.

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Marble-Card Electric Co. to Expand

R. H. Garrison, former General Sales Manager for the Universal Motor Co., has become associated with the Marble-Card Electric Co., manufacturers of electrical machinery, as Vice-President in charge of merchandise. Mr. Garrison's training and experience include a period with the General Electric organization before he joined the Universal Motor Company.

According to Mr. Garrison, Marble-Card have, in the past, catered to a select clientele which has kept the factory busy during good times. The company took advantage of the depression period to retool for larger production and, with the greater facilities now available, wider distribution will be sought through an extensive mail campaign, supplemented by advertising.

The company is a member of the National Electric Manufacturers Association, and manufactures a very complete line of A.C. motors up to 100 h.p., and D.C. motors up to 75 h.p.

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For a "Gam" at Fairhaven

Long past are the days of the plumb-stemmed, bluff-bowed whaleships, but today New Bedford has two whaling shrines — the century old whaler *Morgan*, now in her last drydock on the Col. Green estate at South Dartmouth, Mass., and the Jonathan Bourne Museum on Johnny Cake Hill. As the years have passed the whaleships and almost every

type of commercial sailing vessel have faded from the picture. Within recent memory the five and six remaining masters have disappeared from our shores and, within the same time, yachting has grown from a sport of the millionaire into one of our country's most popular summer enjoyments.

Just as New Bedford, the Vineyard, and Nantucket were centers of the whaling industry, so have they become centers of yachting, with New Bedford leading the way. Where the wharves lining the banks of the Acushnet River once carried their quota of whale oil, now the Fairhaven shoreline is dotted with yacht yards.

A growing center of modern yachting activity, New Bedford has long needed a meeting place where passing strangers, yachtsmen or landsmen, might gather for a "mug up" and a "gam." The New Bedford Yacht Club maintains open house at its Popes Island Station throughout the winter, but it has never attempted to serve meals regularly. Consequently, it occurred to Miss Helen P. Hiller, a Fairhaven girl, that a shipshape galley somewhere along the Fairhaven waterfront, well equipped and nautically fitted out, might profitably be launched, even in a year of hard times. With this in mind, she looked about for a location and found available the Galley at Peirce & Kilburn Yacht Yards, Fairhaven. With the advice of the old salts on hand, Miss Hiller set sail. The Galley has been overhauled and enlarged. The decorations are along nautical lines. Sturdy benches, in gray, and white tables stretch the length of the room with a small bench or two for the convenience of smaller parties. Gay curtains are hung on old whale irons, two irons to a window, with a whale line suitably knotted in between.

To encourage after dinner gam, a chart covering the waters along the shore from Point Jude to Cape Cod hangs on the north wall. For the man who enjoys the detail and action of fine photographs of the sea, several of Albert Cook Church's pictures of Gloucester fishermen in racing trim have been chosen. These are from the collection always on exhibition in the Marine Room adjoining the Peirce & Kilburn offices.

Early in September, the new Galley was complete with its inner entrance well marked by the channel buoys. There's a striped spar to westward, with a lighthouse in the distance behind it, and to come to anchor it is only necessary to bear hard to starboard at the sight of the lone rock spar and slip in behind a ledge to starboard.

The Galley, at the Peirce and Kilburn yard, Fairhaven, is a most attractive place for a "mug-up" and a "gam"

E. J. Willis Co. Handle Hyde Propellers

The Hyde Windlass Company announce that, beginning January 1, 1933, the firm of E. J. Willis Company, 85 Chambers St., New York, will act as exclusive distributors in the Metropolitan area for Hyde propellers, stuffing boxes, stern bearings, struts, etc. They will carry on hand at all times not less than 3000 propellers for immediate delivery, and also a complete line of Hyde stuffing boxes, struts, and other fittings. This stock, together with the facilities of the Willis Co. for machining the propeller shafts which they will have on hand, should put them in a position to give the best propeller service possible. The remarkable growth of the E. J. Willis Company, together with their splendid reputation for real service, prompted the Hyde Windlass Company to select them as Metropolitan distributors.

Mr. C. R. Andrews, who has been in charge of the New York branch of the Hyde Windlass Company, will be affiliated with the E. J. Willis Company in charge of this department.

Winton Diesel engines in all sizes on the assembly floor of the Winton factory, Cleveland, ready for shipment

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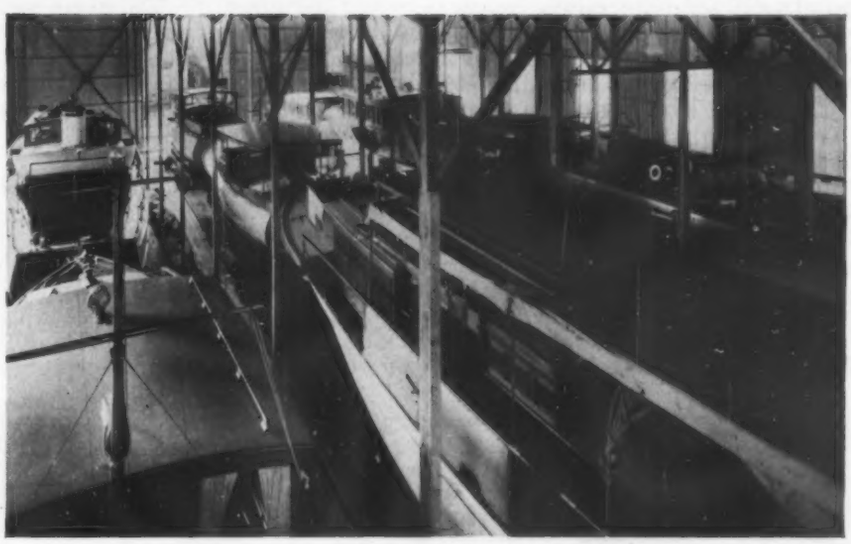
New a.c.f. Service Station

All a.c.f. cruisers in the Metropolitan area will now be taken care of at the new Sales and Service Station, Fordham Place, City Island, and a stock of new boats carried for the benefit of a.c.f. dealers throughout the country. This fulfills a long-felt need for a service of this kind and has been enthusiastically received by a.c.f. owners as well as dealers. Facilities are available for all types of work on any size boat.

An invitation is extended to all owners of a.c.f. cruisers to make a visit of inspection at any time.

The new a.c.f. Sales and Service Station at City Island, New York



A Sea Meeting

(*Continued from page 25*)

kind of a voyage he had had, how he found the westerlies on the run to the Horn, and so on.

He had a lot to tell. Our voyages had been very similar. He left Wallaroo, bound to Queenstown, as we passed Wallaroo bound from Port Broughton to Falmouth; he had had the same voyage — a heavy storm on April 5th that caused him a lot of damage and nearly was his end (it was nearly our end, too); storms through the whole of April; then bad luck in the South Atlantic; 32 days to the Horn, 66 days to the Line, with every prospect of a good passage up, and then the accursed calm here. He was there nine days, just as we had been; we must have been close together during the whole 13,000 miles from Australia, but we had never seen each other before. He had seen no other ships, save steamers (they did not count); he expected they would all be up by then. In the storm his spanker boom had taken charge aft, a helmsman had been smashed up at the wheel and had been in his bunk six weeks afterwards, the breakwater over the main hatch had carried away and had taken charge of the for'ard deck, smashing steel companions as if they had been paper. Most of his damage had been put right, and his ship looked in good order. In the same storm, on the same latitude the same day, we had broached-to after pooping a heavy sea that washed away our compass and flooded the saloon, and the ship had rolled so much we thought she was going over. We were very lucky that we did not lose the ship.

The Captain of the *Pamir* listened to this with interest. We had lost some of our best sails that night and had gone on through the April storms badly handicapped, with heavy sea on deck the whole time; he had the advantage of us there. His midships section saved him from the worst weight of the water and he had never had to heave-to; he beat us to the Horn by four days. Yet we were up with him again on the Line, and had crossed the same day not more than 30 miles apart. . . .

We had tea with him in his spacious and comfortable saloon. In *Pamir*, in the German style, the officers live amidships; the entire crew is housed beneath the one roof, and the poop contains nothing but a spare cabin, some lockers, and the relieving steering gear. In *Parma*, we of the afterguard lived aft, and the crowd lived in a big house on the fore deck, with the apprentices and the petty officers in another house between. We preferred the *Parma's* style, though her saloon was not so beautiful. It was homely and it was watertight, and these are the important considerations. We were shown round the other ship with pride, but though we could admire her beauty and sense the strong feeling of power and grace about her tall masts and yards, and admire the lovely seat of her hull in the water, still we appreciated our own ship the more for this close-up of another one.

That is the real way to see a sailing ship, to pull over to one at sea. In port, it is different; one never sees them at their best. They are given up to stevedores and coal trimmers; the decks are disordered and the crew is laboring with chipping hammers over the side. No, a sailing ship looks best out on the deep water where she belongs. . . .

It was now nearly nine o'clock in the evening, and we had been aboard an hour and a half. The fo'c's'le gang had the evening meal in the fo'c's'le, where the animated discussions were still going cheerily on; some of them had picked out their bunks and had every intention of remaining the night.

This was unthinkable; we had to go. It might have been just a little dangerous to go hunting for our own ship through the North Atlantic in the middle of the night; but it was our responsibility and go we must. While we were in the *Pamir* there was a chance that they might have to take us on to Falmouth, which was none of their business at all; besides, we would look pretty foolish turning up in England in the wrong ship. We would look even more foolish turning up in no ship at all, but we would chance that.

There was a moon. The calm continued. The glass was still very high. There was no indication of a breeze at all. If a 15-mile row was not safe there in a calm south of the Azores, I would like to know where it was safe. Besides, it was cooler and easier to row by night.

We went with cheers, and a bearing on our compass for where we thought our ship ought to be. We expected to be up with her some time before daylight. . . .

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They put a light on *Pamir's* fore yard to guide us on our way, but long after we could not see the light we could still see her rigging, black on the horizon under the moon. A faint air was perceptible then, just enough to fill the ship's sails; they sheeted their courses home and stood on in loveliness under the moon. How gracefully and beautifully she sat upon the water! A big windjammer looks best under the stars, her sails and her low hull lit by the moon. . . . We could appreciate her beauty as we rowed on.

After two hours we still had no idea where our *Parma* was, and of her we could see nothing at all. We pulled on, watch-and-watch again, hour about on the oars; sometimes a little breeze came but nothing much — nothing to cause us anxiety. Hour after hour the moon sailed clear through the cloudless heavens; the luminous shapes of the quaint tropic jelly fish drifted by in the Sargasso weed; the flying fish started up again in alarm from their sleep, and the same startled frigate bird, batlike in the night, flew around us.

A little before midnight we stopped, and burned a blue flare. Our lives might have depended upon whether that was answered. It flickered a minute and was out. . . . Would they see? Would *Parma* answer? Were we headed in the right direction? . . . All eyes fastened on the horizon.

Yes! An answering flare! White and clear against the night, away on the eastern horizon about two points from our course and still ten miles away. We cheered, and bent to the oars once more — on and on.

The moon sank, but the brilliant tropic stars lit the night. The boys sang at the oars, beautiful boat songs in Swedish and in German; we had some of the rum, and blithely now weighed up what chances we might have had of reaching the Azores. They were about 500 miles away; we *might* have rowed there, and then again we might not.

After midnight we could see an oil lamp they had hung in *Parma's* jigger rigging; after 1.00 A.M. we could see the black loom of the sails. By two we were close by and could distinguish her shape; we hailed the lookout on the fo'c's'le head and were answered. We were home!

It had been a great adventure — pulling 30 miles for a sea yarn. The Old Man admitted afterwards that he had been a bit worried about his boat. . . .

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They know that genuine marine motors are designed to withstand the constant high speed loads and uphill pull demanded by every type of auxiliary, launch, runabout, cruiser, or speed commuter. They require motors that develop and deliver a full rated horsepower at *usable* engine revolutions.

If you demand the quality guaranteed by a Kermath all-marine motor, by all means shun the grave uncertainties associated with a bargain price substitute! Safety, satisfaction and thrifty economy mean everything—Specify a Kermath for trouble-free, long-lived performance. It pays!

Don't fail to get all the facts. Kermath engines range in size from the husky two-cylinder 8-10 horsepower motors used so extensively by the U. S. Coast Guard to the 1414 cubic inch 300 horsepower medium duty and 450 horsepower high speed V-12 for increased speed and bettered performance in large cruisers, runabouts and commuters.

New engine catalog—with complete specifications and interesting boating data mailed on request.

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Up the Lonely Colorado

(*Continued from page 36*)

Wash Canyon and Rapids come next, but by now we are indifferent to rapids, knowing how the *Powell* sleds over them. To be sure, any mishap might put us in a position immediately distressing and perilous, with the best we could hope for a long log-ride home.

In effect, mounting the rapids was like going through locks in a canal, but decidedly faster. In the course of our hundred miles, we climbed in excess of three hundred feet, and most of this was done in abrupt jumps. As Garrett put it — on paper — we were going up the back steps to the Grand Canyon.

Automobile maps would lead one to believe that Pierce's Ferry is still in operation, but today only an amphibious car could get across. Stopping here to check on our gasoline, we found it low. Could we make the Flour Sacks? There was but one way of finding out.

Within a few miles, Travertine Canyon began to unfold. It is the most charming part of the trip, with a distance-blued glimpse of the soaring plateau through which this stupendous river breaks. That is the lower end of Grand Canyon, but Travertine commands immediate attention.

Here, dripping, limestone-laden springs have been at work through the centuries, hanging stony tapestries over the walls, building bulbous mushrooms and crystalline shelves above the river. These latter form small caves, where maidenhair fern and scarlet-blossomed monkey flowers thrive. Silence is absolute. Even the river, flowing like liquid bronze through deep pools, makes no whisper of sound. If ghostly Redmen meet for conference anywhere on this increasingly uproarious continent, certainly this must be the place.

Travertine Canyon is cut by many deep lateral washes, heavily grown with brush. Following one of these, we came presently to a clear brook, in which it was necessary to wade, often waist-deep, to make progress. After half an hour of scrambling, we found ourselves in a U-shaped niche between the closing walls. Here flows as pleasing a waterfall as the world can claim. It is more properly a chute than a falls, for the stream has deposited travertine through the long years, filling in gaps where the native green and purple slate has crumbled away. Beautiful as the water is as it slides down this nearly perpendicular flume in feathery ripples, it has a rival in the cascade of fern which seems to spring from every ledge.

Surely, this falls, back from the river as it is, cannot have been seen by more than a dozen white men. There must be others which have never been seen at all. Unexpected delights remain for boatmen of the future, when the lake is filled and the roar of motors on this river becomes no uncommon sound. Yet there is satisfaction in having seen even a small part of them before they are too-common property, purchasable with a railroad ticket.

Now, as we push on, the walls of the gorge become suddenly higher. Eyes despair of catching details; they become exhausted trying to grasp the awe-compelling magnificence of the whole. There, between three and four thousand feet above us, is the rim, receding in an incomprehensible parade of cliffs, buttes, terraces and shelves.

Like anyone who attempts to describe, to paint, or to photograph even a small portion of the Grand Canyon, I must now apologize and retreat. It cannot be done. What might be caught in one moment is changed the next. Shifting shadow, dimming light, a new angle — all these bring changes so rapid and so startling that one can only look, as one would only listen while a great symphony was being perfectly played. The music catches you, grips you, throws new glamor over the whole world for a time. Then you come away, or the movement ends. You recall this enthralling vista, that stirring passage, and immediately you are lost. The overwhelming entirety escapes and even if you find yourself able to hum the theme, you can no more supply the deep throb of drums, the lilt of flute, than you can put on paper the words to conjure up a reasonable impression of this terrific chasm — in the bottom of which, like a nervous water bug, you had skated for a day or two.

Fifteen miles into this still, rocky world we pushed; and then, above a last rapids, Emery stopped the boat. We were near the upper limits of the future lake, in whose eventual depths we had been cruising. Less than five gallons of gasoline remained in the tanks — and the Flour Sacks were two miles further. An effort to make them would have meant a powerless drift downriver to Temple Bar. We recalled the intervening rapids, and the vital need of steerageway to avoid their lurking dangers. The *Powell* had served us well. We had no desire to crack her up, just yet; less desire to complete our homeward trip with a long swim.

We decided against the Flour Sacks. Continuing upstream for half a mile more, Emery reluctantly turned and headed for the camp in Iceberg. "This," he said, with that rueful grin of his, "is farther upstream than any one has gone by boat before."

But our regret was not for the Flour Sacks. Somehow, it seems just as well that they shall growl for a while longer without the competitive roar of a motor sounding in their lonely gorge. What we did regret was the actual turning back — which must too soon lead us away from this remote and sublime world.

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The Cruise of the "Marco Polo"

(*Continued from page 46*)

phoned to the commandant. For some reason they wanted me to talk. I tried to speak German into that Bulgarian telephone to a man at the other end of the wire who, I believe, was trying to speak French. At any rate, I couldn't have been very successful, as the upshot of it was that I moved the boat for the third time.

Nikopoli reminded me of a circus; the streets were littered with hay and cornstalks, while the oxen, burros, and water buffalo munched languidly away, attended by their fezzed Turkish drivers.

After another hard day's run, I arrived off Giurgiu, Rumania's big river port and the origin of most of the crude oil cargoes going up the Danube. "You are late. We've been expecting you for weeks," the *Herr Director* of the First Danube Steamship Company announced as I tied up to his float. "The last ship goes up the river next week." It was good to be expected and still better to get mail from home. In Vienna I had arranged to have *Marco Polo* shipped back to Regensburg by barge from Giurgiu, the last steamer port of call in Rumania.

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It was after dark when my train arrived at Constanza, but I knew I had at last reached the Black Sea, for through my hotel window I could see flashing gas buoys and the lighthouse on the end of the mole, while the deep-throated whistles of ocean shipping could be confused with nothing else. I had a feeling of great peace and pleasure — I had reached my goal, which so many times during the summer had seemed unattainable.

Queen Marie was still at her seaside palace in Balcic, below Constanza, and acquaintances in Bucharest had written that I would call. Her Majesty received me

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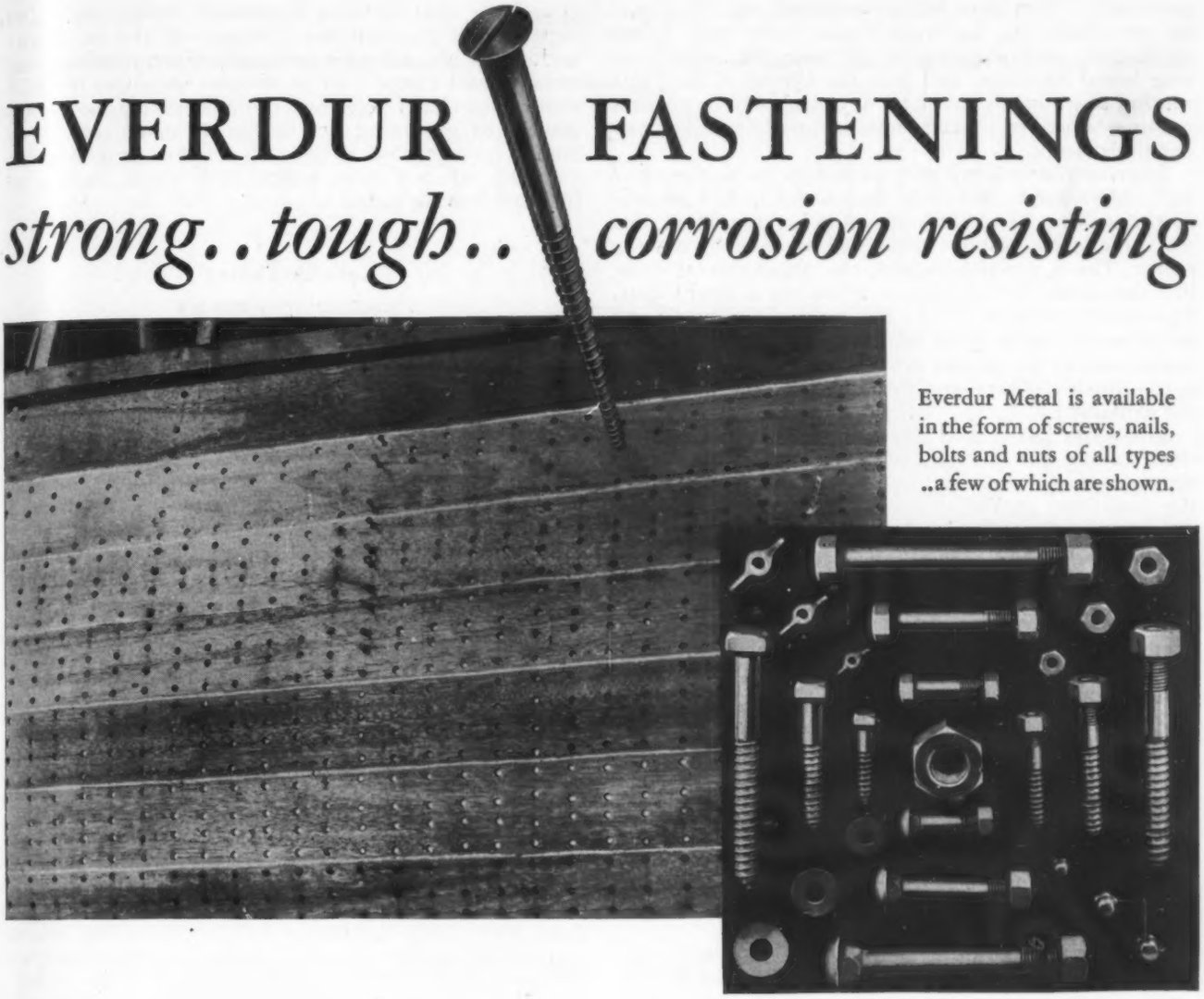

Everdur Metal is available in the form of screws, nails, bolts and nuts of all types ..a few of which are shown.

IN THE brief space of four years, Everdur* has gained the nation-wide recognition of architects, owners and builders as the ideal metal for fastenings and fittings of all types.

This strength-of-steel alloy of Anaconda Copper, silicon and manganese, offers exceptional resistance to corrosion. These qualities, combined with unusual toughness and high ductility, make Everdur the most durable and dependable metal available at moderate cost.

Other Anaconda Metals which make boats last longer include Tobin Bronze*... since 1885 the industry's overwhelming choice for dependable propeller shafting; Anaconda Nickel Silver for trim and fittings; and Anaconda Copper, Brass and Bronze for a hundred uses from cutwater to rudder.

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graciously. "You have had a wonderful trip. You must tell me about the Ludwig's Canal," she said. I was astonished; so few people living near that canal had ever heard its name, and here the Queen of Rumania wanted to know all about it. A young lady in peasant costume came in. "And here is another sailor, my daughter Ileana."

Princess Ileana is not only a sailor, but a navigator as well. After lunch she took me sailing in her twelve-metre cruising ketch, but the mild-looking Black Sea was practically without wind and we had to use the motor. The day was beautiful, the water crystal clear, like the water at Catalina, and the sea a bright blue. The coast is very much like the coast of California; we could see for miles down into Bulgaria. But a princess cannot sail as she pleases into another country. "There is too much red tape and formality, it isn't worth it," she explained.

Salt water has a fatal appeal for me; I have a hard time staying out of it. To be frank, in landing on the slippery quay, I managed to fall into the Black Sea for the first time, and had to appear at tea in the Archduke's pajamas while my clothes dried.

Back in Giurgiu *Marco Polo* looked neglected and forlorn, her top, signal mast, and gear stowed for shipping. As the big crane slowly picked her out of the water and swung her aboard the barge that was to take her back to Germany, I realized that her long voyage was over, that she had done everything that was expected of her — and more.

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"Nixie"—A 22-foot Cruiser

(*Continued from page 53*)

ward. The house has been kept low for the sake of appearance. It is made to look lower by extending the house sides forward and curving them inboard to meet the forepeak hatch coaming.

Nixie was built by M. M. Davis and Son of Solomons, Md., who did a characteristically fine job, true to line, sound in construction and correct in detail. Mr. Davis fitted her with a bright mahogany covering board, a refinement I did not ask for, which blends beautifully with the Edw. Smith and Co. light apple green topsides and dark green decks. All blocks are by Merriman Bros. Her rectangular hollow spars carry Jack Wood's "Narragansett" snap clew outhaul and sliding gooseneck with downhaul. The sails were fashioned under the fine Italian hand of Prescott Wilson, of Burrows, and they set as if chiseled from marble. Her one item of plumbing consists of a Sands bilge pump, but to date it has been of little help, as she does not leak a drop. And before I forget it, *Nixie* is an auxiliary. Her power consists of a 4 h.p. Elto outboard, none other, there being a bracket on the transom for its convenience.

This fall, at Gibson Island, I tried her out, as did almost everyone else frequenting that yachting center. I am told that several of my friends shamefully neglected their own boats to sail *Nixie*. During the month she was there they had ample opportunity to test her under almost all conditions up to and including a 57-mile (by the anemometer) squall. She is not intended for such stuff and the only interesting feature of this latter episode is that nothing happened except that after dousing the mainsail she "clawed off the lee shore" under her jib. All who have sailed her liked her immensely and I trust I do no violence to proper restraint when I say that I believe she fulfills exactly the express conditions governing her design: a smart, safe little hooker for afternoon sailing and old enough to stay out at night. She is a sweet sailing little outfit, making no fuss and leaving none.

\+ + +

"Let's Go Fishing"

(*Continued from page 27*)

affords more views of the water, the bridges are longer and more numerous, and there are more palms, suggesting, in many cases the palm-fringed lagoons of coral atolls of the South Pacific (according to the movies).

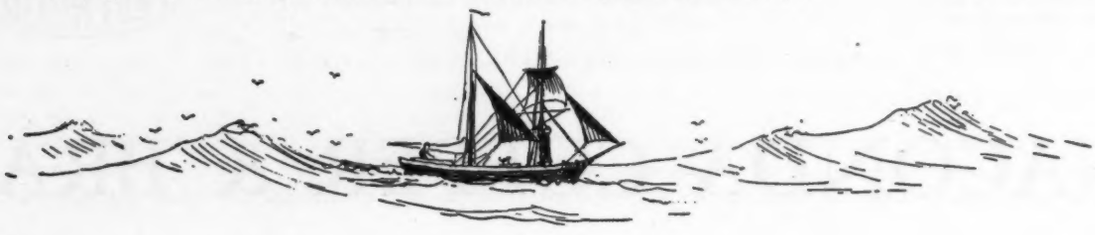
As to the fishing — who can say where it is the best, for nowhere is it poor. According to the guides, it is best, of course, off each one's particular territory. The captains of the Lower Keys say that only in the waters of their more remote bailiwick do the biggest fellows thrive and prosper, while those of the Upper Keys remark that the older camps (which are on the Lower Keys) are pretty well fished out.

Be such things as they may, it is certainly more difficult and requires more time to visit the Lower Keys unless one goes by his own yacht or by the single daily train. It is good to know that it is possible to visit the Upper Keys, enjoy a good day's fishing, and get back to Miami by car the same day.

Charter rates for boats with guides are pretty well standardized, $20 to $25 a day, or sometimes $30 a day when tackle is furnished, for reef fishing outside; considerably less for the smaller boats which stay inside and give many a fisherman a good day's catch of kingfish, mackerel, pompano, and grouper. Overnight accommodations range from $6.00 a day, American plan, at the more pretentious resorts, to $.75 for overnight cabins and lunchroom fare. The rate for the ferry crossings (one fare covers both) is $3.50 for cars of less than 14 feet overall length, with a charge of $1.00 per foot additional, and $1.00 for each passenger besides the driver. There is a daily bus to Key West which will carry you there from Matecumbe for $1.90, or from Miami for $3.30, including ferry charges.

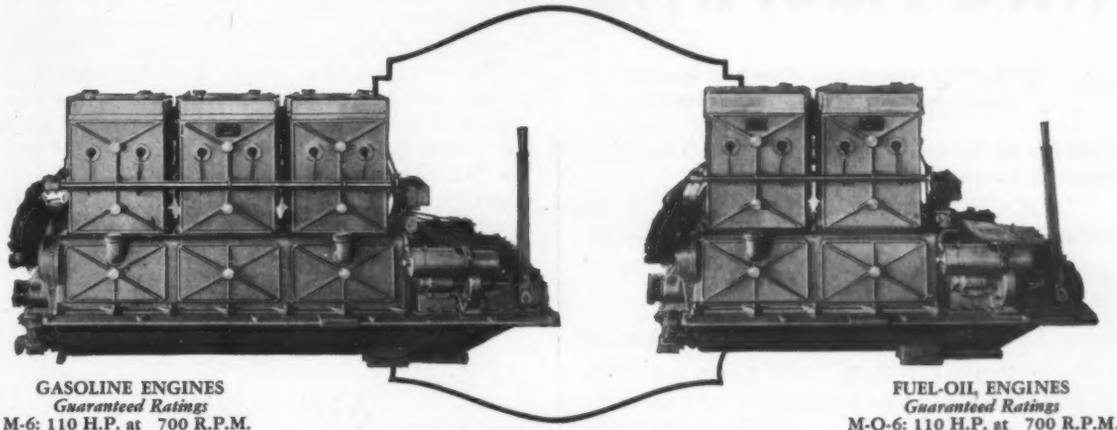
It is hoped that the invitation to fishermen which the Florida Keys extend will lead no reader to infer that good fishing may not be enjoyed off Palm Beach, Miami Beach, in the Gulf, or, in fact, almost anywhere in Florida. It is certain, however, that you can depend upon the Florida Keys to provide plenty of the gamiest sort of fishing and, even if you are a rank novice, plenty of fish. No license for salt water fishing is required.

But even if you do not care for fishing, don't miss a visit to these romantic tropic isles. They have a wild charm, different from that of any other spot within these United States. If you're a bit fed up with the noise, bustle and confusion of city and business life, you will find peace and quiet in a warm, healthy climate, with plenty of sport, which you can make restful and relaxing, or exciting and stimulating, according to the type of fishing you elect to pursue among these breeze-swept emerald Florida Keys.



Additional Horsepower

—at no increase in cost



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Gar Wood—speed king of the boating world, and himself a builder of superb motor boats—writes

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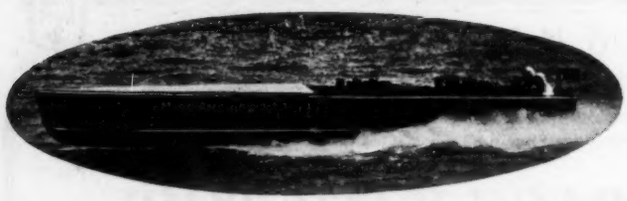
GAR WOOD also knows well Aquatite's speed-making qualities—he specified it for Miss America X, the 1932 Harmsworth Trophy defender.

Such testimony has long been the proud possession of Edward Smith. Since 1827 Edward Smith paints and varnishes have been traditional on fine yachts and all sorts of water craft. Every American cup defender since 1851 has been trimmer and faster from using Smith paints and varnishes.



The reason for Edward Smith super-quality is simple: None but quality gums and first grade oils ever find their way into the manufacture of Smith marine finishes. Painstaking care is always used in blending these superior ingredients, and they are aged for months to uphold the century-old Smith quality.

Be wise, be economical, be sure of results. Always specify Edward Smith finishes—inside and out—on whatsoever water craft it is your good fortune to own.

EDWARD SMITH & CO.

LONG ISLAND CITY, N. Y.

You will find a Smith distributor in all important American ports, and many abroad

Navigation Simplified

(*Continued from page 42*)

of the ship subtracted from 90 degrees gives the third side "VP." In the formula, however, we did not subtract the observed altitude or latitude from 90 degrees because the construction of the formula automatically takes care of this.

The above explanation is, perhaps, not particularly lucid, but anyone interested in the theory can delve into Bowditch for more complete information on solving the spherical triangle. In short, we have a triangle and can measure its three sides; then, by employing a formula, we can solve the triangle to determine the angle "t" which is the ship's local hour angle, or sun time.

This completes a series of three articles, and it is hoped that with them pasted in your hat, and with a Bowditch under one arm and a Nautical Almanac under the other, you can grasp the subject and get down to the practical business of locating your position at sea. Once a man can find his position at sea he will be stimulated to study the more technical books and can learn the various short methods employing the line of position.

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A New Model Yacht Class

(*Continued from page 58*)

behaved boat, of dimensions which make transportation an easy problem.

Three clubs sent their selections to Marblehead in an attempt to lift the coveted trophy for the first time. The first challenge was received from the Boston Model Yacht Club and, in rapid succession, two more came in from the Staten Island and Prospect Park Model Yacht Clubs, of New York and Brooklyn, respectively.

Boston sent the *Beaverette*, owned and designed by Fred L. Pidgeon, and raced in his absence by Robert Paterson and William H. Rich.

Staten Island sent the *Maybe*, owned and sailed by Arvid Anderson, with Charles Francis as mate.

Prospect Park chose the *Minx*, owned, designed and sailed by Gilbert H. Hoppin, with the assistance of Daniel Manning of the local club.

Marblehead defended with the *Cypher*, from the board of her skipper-owner, Francis E. Courtis. John H. Tatterfield acted as mate.

All three challengers were particularly adapted to open-water sailing from skiffs, and the light fluky airs found during the series at Redd's Pond, coupled with the sailing of a comparatively short two-mark course, gave these boats some concern. All used some form of Braine steering gear, which seemed quite difficult of adjustment, while the defender used a simple limiting-screw device, without rubber bands or spring tension of any sort. How skilfully the visitors handled their craft, may be judged from the fact that after sailing thirty races (five rounds each), the score in points stood: Marblehead 23, Boston 23, Staten Island 22, and Prospect Park 13. The Prospect Park boat was disabled early in the final round, and was withdrawn after it was found that the necessary repairs would consume more time than was available. The tie for first place was decided by a three-race sail-off, in which the Marblehead boat won the first two, straight, thus settling the matter.

All three clubs stated their intention of challenging again next year, and Marblehead agreed that had one of the visitors lifted the cup in this series, they would have gone after it another year themselves.

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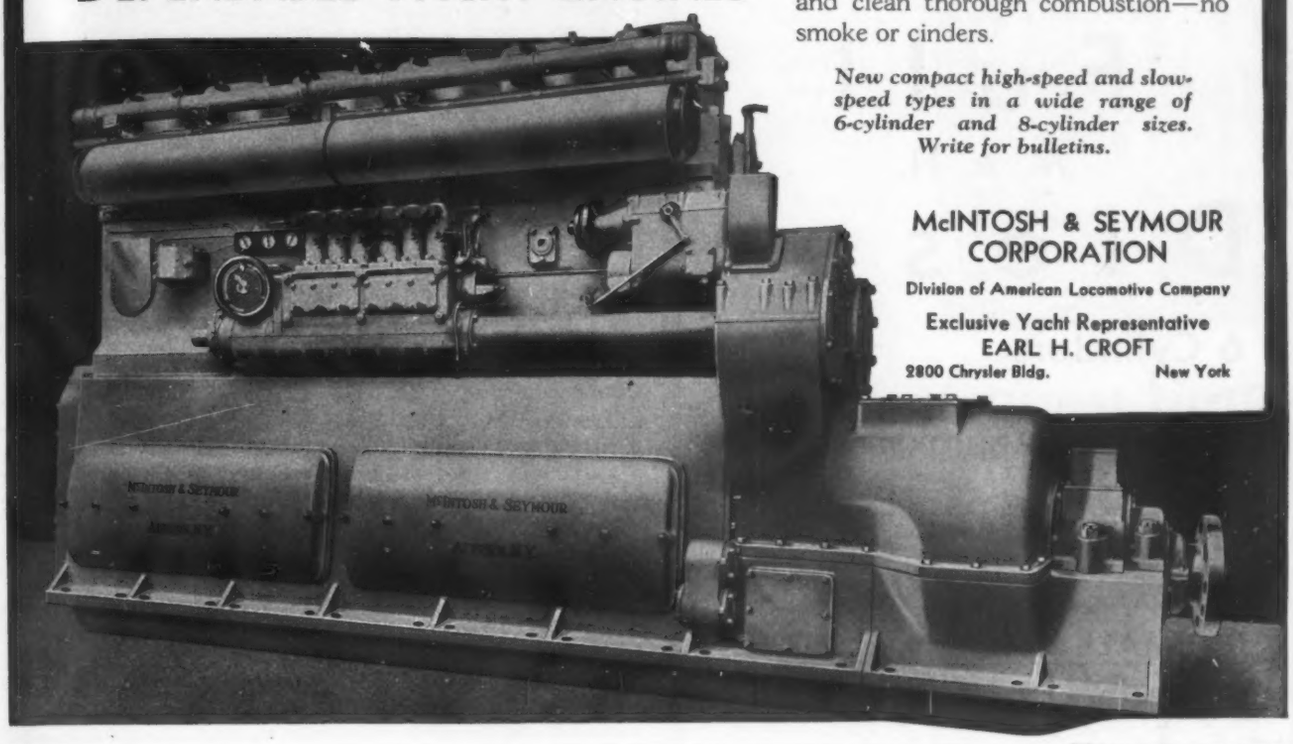

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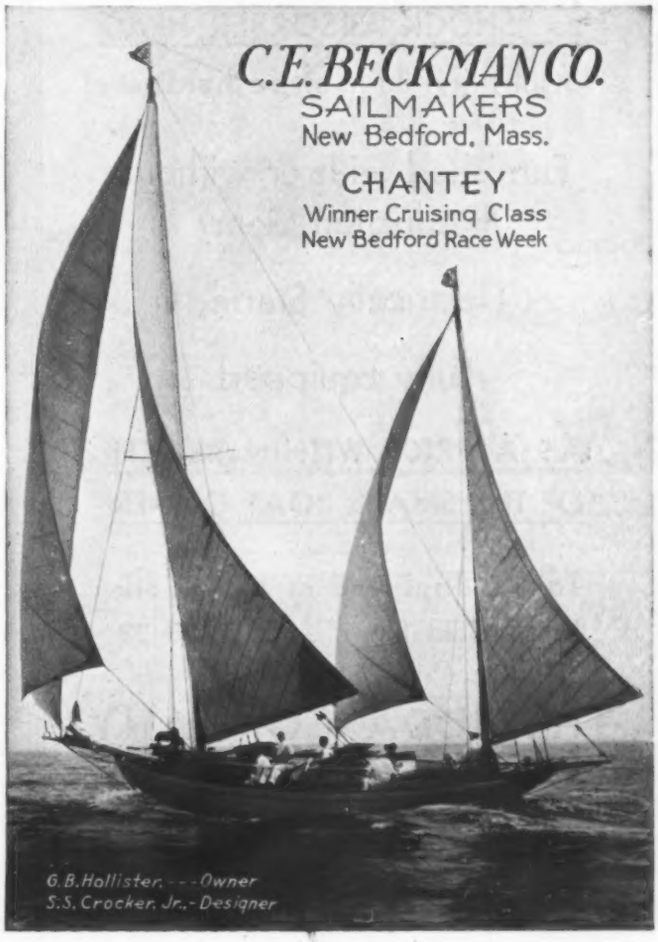

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THE BUDA COMPANY

Harvey (Chicago Suburb) Illinois

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From Bermuda to Spain

(*Continued from page 32*)

So we jogged along for five days and nights, except for one night when we rode to a sea anchor for a rest.

We rode beautifully then, just two points off the wind and not varying more than half a point either way. We hated to get underway again, especially since, just after daylight, we saw a freight steamer bound north pass us close aboard, burying her bows in the seas and generally making more fuss than progress. But, although we were comfortable, we were drifting where we didn't want to go. So we started jogging again.

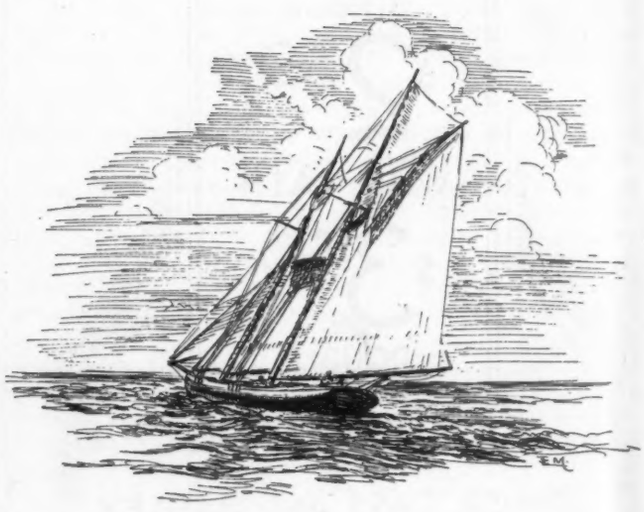
But the sad blow came when that wind finally did die out. After we had hung on to our northing so hard, instead of dropping another couple of points off the wind and making fairly good time only a little south of the rhumb line for Gibraltar, we were certainly disgusted when the "Portuguese trades" failed us completely. After the E.N.E. wind dropped we didn't have a whole sail breeze for a single hour the next five days — that is, until we arrived in Lagos.

The less said about those five days the better. It is enough to say that all we got of the trades was a continuous swell in which we rolled endlessly and tried to make our sails draw when we could, and used our motor only when the sails were absolutely useless, because our gas was low.

We made our landfall on Cape St. Vincent, as intended, but we took twenty-four hours to get around it. Fortunately, there was no fog, a frequent condition here, as the traffic was very heavy, five or six steamers being in sight all the time. It was at this point that we decided to find some place to duck into for a day or so to get fresh supplies and to wait for a bit of wind.

Our charts were too small in scale to show us anything but the main outline of the coast and a few names. But the "Pilot" described Lagos as a fairly good summer anchorage, and the town sounded worth seeing. In the evening, when a bit of breeze picked up, we started exploring along the coast. It was an evil looking, rocky shore, and the noise of the swells breaking in the caves could be heard at least a mile offshore. It seemed a bad shore to come close to but, as a matter of fact, it was steep-to and clear of danger.

Finally, we found Lagos and dropped anchor in the snug harbor, fastened to the mainland of Europe at last.



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Look for this cruiser at The New York Motor Boat Show, Grand Central Palace, January 20–28.

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NOTE: This new line of Sea Skiffs is in addition to the regular line of heavy duty WHEELER "PLAYMATE" Cruisers and Yachts, sizes 22' to 80'.

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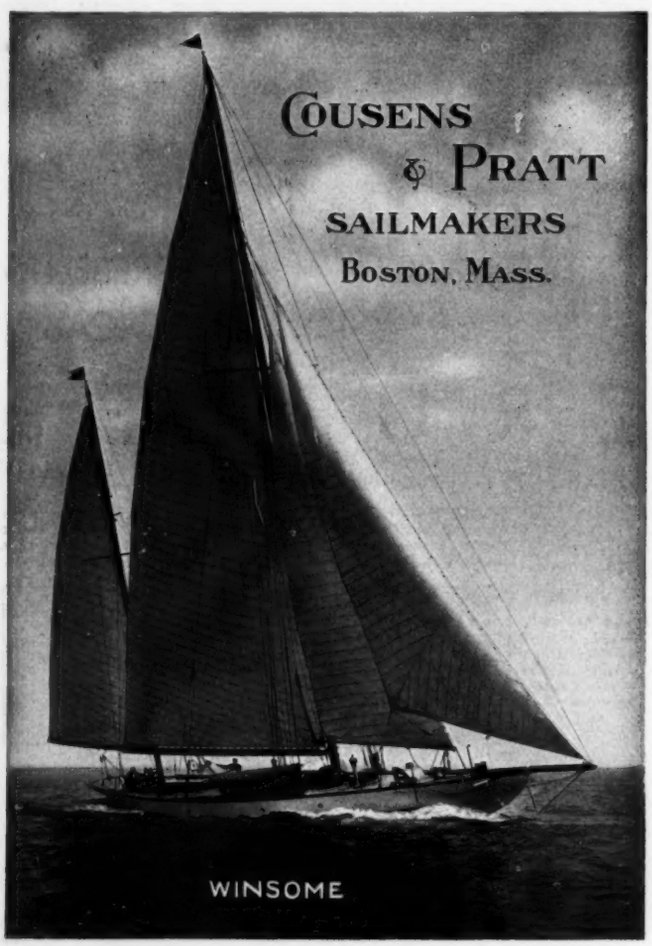
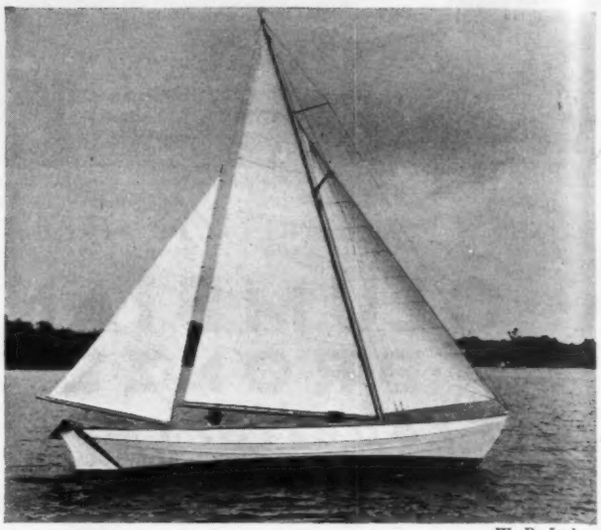


An Experimental Rig

IF TO the definition of "to foster," as meaning "to cherish, sustain and promote," is added "by experiment and invention" it would seem as if Charles H. W. Foster, senior Corinthian at Marblehead, has justified his name, at least in the yachting world, for in the sixty-odd years in which he has gone down to the sea — in more pleasure craft than any other American yachtsman — he has tried scores of devices, many of them original, and all with the main idea of greater safety and speed



W. B. Jackson

A 21-foot dory with an experimental yawl (?) rig conceived by C. H. W. Foster

under sail. Mr. Foster, it may be remembered, was one of those who helped to foster the experiments in aerodynamics ten years ago which resulted in the epoch-making staysail schooner *Advance* the following year.

In describing his latest test on a 21-foot sailing dory, which he calls a yawl, as he regards the after sail as a mizzen or jigger, he says:

"There are a number of objects which seem to be of advantage in this new rig. It occurred to me that if the wind from the mainsail could be thrown onto the jigger, just as it is thrown from the jib onto the lee side of the mainsail, then the effectiveness of this small after sail would be greatly increased, especially to windward. To accomplish this the luff of the jigger must be brought close to the leach of the mainsail.

"Then again I felt that it was of great advantage to rake the mast in boats of this type where the spar is stepped far forward, in order that when going into a sea, there would be more of a thrust than a whip.

"Furthermore, by raking the mast and throwing the jigger forward the total sail is more concentrated in the middle of the boat, while considerable weight is saved aloft. It is also handier to rig a jigger sail up a stay than on a mast.

"The 21-foot dory which I have given this new rig, has an iron fin keel weighing 460 pounds, which seems to make the boat stiff in any ordinary weather.

"As far as I have been able to determine in the early trials of the yawl, the experiment has been a success, and I sincerely hope that someone will apply the rig to a larger craft."

W. U. SWAN

+ + +

Alden's Latest Auxiliary

(*Continued from page 69*)

and well-equipped galley. Abaft the galley, to port, is a double stateroom, while opposite is a roomy toilet room, hanging locker, etc. The commodious main cabin has two transom berths and one built-in berth, with an additional quarter berth to starboard. A 40 h.p. Falcon motor with reduction gear is installed under the bridge deck.

Woolsey Announces New Anti-Fouling "Green"

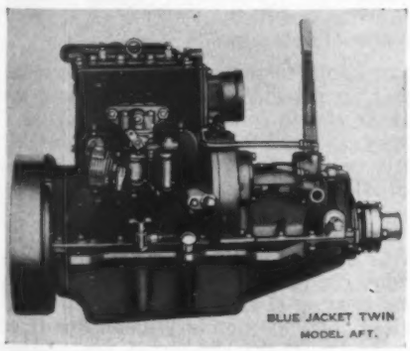
Last season the C. A. Woolsey Paint and Color Company, of Jersey City, announced to the marine field a new copper bottom paint guaranteed to keep a boat's bottom free of grass and growths for six months, and to be barnacle- and worm-proof. This achievement was introduced under the trade name of "Toxicop," meaning toxic copper. The Woolsey Company now states that the first season's results have amply justified the broad claim made for this bottom paint.

The manufacturers state that in deference to an objection to the use of the trade name "Toxicop," they have changed it to "Tali-Cop," from Talis, or magic, and copper.

Last season this new copper paint was offered in red and brown only. Although at that time a green was also available, it was deemed advisable to conduct a year's further test before offering it to the boat owner. The result of this test proved so satisfactory that a Tali-Cop green is now offered. This green, it is stated, has been formulated along entirely new lines of research, although the basic and proprietary features of the red and brown Tali-Cop have been essentially retained.

A Vibration Dampener

The Marine Rubber Company, 461–463 Fourth Avenue, New York City, have announced a new and important rubber specialty known as a Vibration Dampener for use in installing marine engines of all types. This device is made in several sizes in the standard width of $4\frac{7}{16}$ inches and comes in lengths of 12, 24 and 36 inches. The 12″ length will support motors up to 1000 lbs.; the 24″ will support motors up to 2000 lbs., and the 36″ length, motors up to 10 tons. In every case a set of four dampeners is required. An example of the low price may be obtained from the fact that a set of four dampeners in the 12″ length sells for $10.00.



BLUE JACKET TWIN MODEL AFT.

The Universal Blue Jacket Twin

The Universal Motor Co., Oshkosh, Wis., announce their new Blue Jacket Twin — a 100% marine 2-cylinder, 4-cycle, engine on the design of which two years have been spent in experimental work. The makers state that this new engine is as smooth in operation as the average "four" and is exceptionally economical to operate.

The standard model is equipped with a magneto, although battery ignition is available, consisting of 6-volt electric starter, generator, distributor and coil, a feature seldom found on any engine of this size.

The Blue Jacket Twin was designed to meet the demand for a good small engine of 5 to 10 h.p. It will make an ideal power plant for small open boats, slowly moving launches, fishing boats, small cruisers, and auxiliaries. It will throttle down to very low speed without missing, and will "wind up" to 2000 r.p.m.

The Blue Jacket Twin is now ready for delivery at a price of $215.00 for the standard model.

Barbasol

BILL TAKES ONE ON THE CHIN AND LIKES IT

BILL I BOUGHT YOU A PRESENT TODAY
HUH? AGAIN? I TOLD YOU NOT TO BE BUYING ME PRESENTS, DIDN'T I?
IT'S A CREAM FOR YOU TO SHAVE WITH SO YOUR FACE WON'T GET ALL IRRITATED AND HURT EVERY TIME
GREAT CAESAR'S GHOST, WHAT NEXT! MAY I ASK WHAT THE NAME OF THIS STUFF IS?
IT'S BARBASOL, AND NOW I CAN THROW AWAY THAT MESSY SHAVING BRUSH YOU WON'T NEED IT
BARBASOL, HUH? SAY I'VE HEARD OF THAT LET'S SEE IT!
HOW WAS IT?
GREAT! SWELL! I FEEL MY FACE! BARBASOL-BARBASOL DUM-DE-DUM-DUM
Hal Stephen

SHAVE WITHOUT LATHER! Use Barbasol for the quickest, coolest, smoothest shave you've ever had. Because it's a cool, smooth cream, it holds the whiskers erect so the razor can zip them off with never a pull or a scrape. It leaves the natural oil in the skin, keeps your face soft and smooth, protects it from sun and windburn. Try it today and see for yourself why it's the fastest-selling shaving cream in America. But use it right. **1.** Wet your face and leave it wet. **2.** Smooth on Barbasol—no need to rub it in vigorously. **3.** Wet your razor and SHAVE. That's all there is to the shave of a lifetime. Generous tubes of Barbasol are at all druggists', 35¢ and 65¢, or large jars, 75¢.

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In every 30¢ tube there is a free Tefra toothbrush refill, to fit a lifetime Tefra refillable toothbrush handle. For full information, tune in Barbasol radio programs listed.

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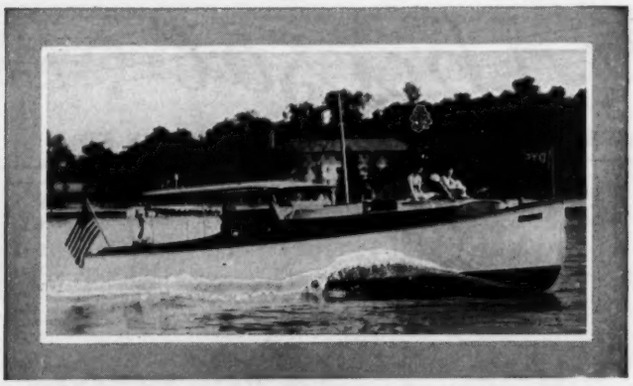
Barbasol Round-up with Carson Robison and his Buckaroos, in songs of the plains and mountains, WEAF-N.B.C. Red Network, Tuesdays and Thursdays, 7:30 P. M., Eastern Standard Time.

Consult radio page of your local newspaper for stations



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Special showing to be held again at Fifth Ave. and 15th Street showroom

Again this year a comprehensive showing of the new Matthews Cruisers will be held at Bruns, Kimball & Company, largest marine display room in New York City, during the week of January 20–28.

By all means attend the National Boat Show — then come and see Matthews' latest creations.

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LUX FIRE PROTECTION

A Course in Celestial Navigation for Yachtsmen

(*Continued from page 20*)

determining time with considerable accuracy. The latter is usually a chronometer, although a short wave radio set capable of receiving time signals may be used in conjunction with a good watch. For short trips a first-class watch which has been reasonably well rated is adequate.

Consideration of these facts has led to the conclusion that a course in celestial navigation could be worked out which would furnish students with sufficient information to permit them to determine their position at sea by observation of heavenly bodies, without requiring more time for instruction and study than the average yachtsman could afford to invest.

The object of the course would be to give the students not only the necessary formulae and rules for the solution of problems, but also enough general background to provide a reasonable understanding of the methods and terms involved in the solutions.

The preparation of such a course has been undertaken by C. A. Chase and F. D. Powers, both of whom have navigated yachts in several of our long distance races. It will consist of twelve weekly lectures of one and one-half hours each, and it is expected that the student will need at least an equivalent amount of time for the solution of assigned problems. The course also includes a separate evening each week (without extra charge) for those who wish to come in to work the problems under individual instruction or for those who may feel that additional help is needed for one reason or another.

Members of the class will be supplied with copies of the American Nautical Almanac (1933) and Hydrographic Office Publication No. 211. Sextants and Rude Star Finders also will be available for instruction purposes. A general acquaintance by the student with dead reckoning and the use of the Mercator chart will be presupposed.

The course begins January 26th, 1933, at the Engineering Societies Building, 29 West 39th Street, New York City. Further information may be had from C. A. Chase, whose address is Mendham, N. J.

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A Happy New Year for Motor Boating

(*Continued from page 63*)

rumored participation of Lady Huston, who owns three of the Rolls-Royce Schneider Cup machines and who financed the last British entry in that classic contest, from submitting a challenge. The other story says that Rolls-Royce has something very revolutionary up sleeve in connection with the next Harmsworth race. So you can take your choice.

\+ + +

A shake-up among the officials of the Middle Atlantic Outboard Association, which conducts the Albany-to-New York marathon, at its annual meeting at the Lexington, New York, on December 1st, resulted in the election of William Rozett, of New York, a well-known outboard driver, as commodore. Edward H. Patterson, Jr., of Troy, N. Y., former commodore, was made a director, along with Lew Franco, of New York, and Frank Schineller, of Brooklyn, both of whom did things in last summer's racing. Fred Jacoby, Jr., of North Bergen, N. J., was reëlected vice commodore, and Paul Hyatt, rear commodore to replace Reece Hatchitt, who has retired from the sport. Other reëlections were: Ira Hand as treasurer, and Charles Alexander as secretary. Harvey E. Hauptner, of City Island, N. Y., was named measurer to replace Bruno Beckhard, who has moved to Florida. Two honorary directors added to the list were James Peaslee, of Chicago, and Phelps Ingersoll, of Middletown, Conn.

The meeting voted that this year's Albany to New York race, some Sunday in May, will be placed on a handicap basis and will be confined to engines of Classes B, C and F. The association is in good shape and planning an active season.

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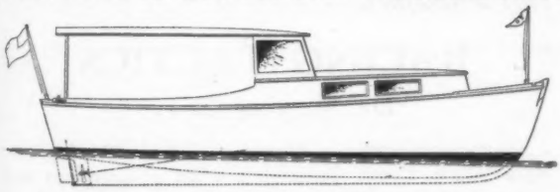

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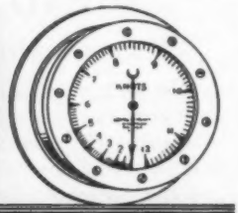

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